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No. 89

In the Supreme Court of the United States

OCTOBER TERM, 1946

THE UNITED STATES OF AMERICA, APPELLANT

v.

NATIONAL LEAD COMPANY, TITAN COMPANY, INC., AND E. I. DU PONT DE NEMOURS AND COMPANY, INC.

ON APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK

BRIEF FOR THE UNITED STATES

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OPINION BELOW

The opinion of the district court (R. 185) is reported in 63 F. Supp. 513.

STATUTE INVOLVED

The Act of July 2, 1890, 26 Stat. 209, known as the Sherman Act, provides in part as follows:

> SECTION 1 [as amended by the Act of August 17, 1937, 50 Stat. 693]. Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is here-

by declared to be illegal: * * * (15 U. S. C. sec. 1.)

SEC. 2. Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor, * * * (15 U. S. C. sec. 2)

* * * * *

SEC. 4 [as amended by the Act of March 3, 1911, Sec. 291, 36 Stat. 1167]. The several district courts of the United States are hereby invested with jurisdiction to prevent and restrain violations of this act; and it shall be the duty of the several district attorneys of the United States, in their respective districts, under the direction of the Attorney-General, to institute proceedings in equity to prevent and restrain such violations. * * * (15 U. S. C. sec 4.)

JURISDICTION

The judgment of the district court was entered on October 11, 1945 (R. 307). The Government's petition for appeal and the separate cross appeals of the defendants were all filed and allowed on April 18, 1946 (R. 329, 334, 335, 350).

The jurisdiction of this Court is conferred by Section 2 of the Act of February 11, 1903, 32 Stat. 823, 15 U. S. C. sec. 29, and Section 238 of the Judicial Code, as amended by the Act of

February 13, 1925, 43 Stat. 936, 938, 28 U. S. C. sec. 345. Probable jurisdiction was noted on May 20, 1946 (R. 1289).

QUESTIONS PRESENTED

1. Where a court finds, in a suit under Section 4 of the Sherman Act, that a combination has created and maintained a patent position in violation of the antitrust laws and has illegally extended privileges granted by the patent laws, should the judgment enjoin future enforcement of the misused patent privileges?

2. Whether the judgment below granted adequate relief against the foregoing abuses in permitting the defendants to charge "reasonable royalties" in connection with the requirement for licensing the abused patents to any applicant.

3. Whether the judgment below granted adequate relief by permitting defendants to condition such licensing upon the grant of reciprocal licenses by the applicant under all patents owned by such applicant during the period of five years after the entry of the judgment.

4. Whether a combination which has illegally acquired a monopoly of technological information relating to methods and processes for manufacturing titanium pigments should be required to furnish such information at a reasonable charge to any applicant.

5. Whether two producers of over 90% of the pure titanium dioxide and 100% of titanium com-

posite pigments who by illegal combination have acquired domination and control over the titanium industry, should be required to divest themselves of part of their plant capacity.

TABLE OF ABBREVIATIONS

1. The following abbreviations will be used to identify the defendants and co-conspirators:

NL	National Lead
Tinc	Titan Company, Inc.
DP	E. I. du Pont de Nemours and Company, Inc.
TP	The Titanium Pigment Company, Inc.
Krebs	Krebs Pigment & Color Corporation
TAS	Titan Co. A/S
IG	Interessengemeinschaft Farbenindustrie Aktiengesellschaft
TG	Titangesellschaft, g. m. b. h.
SIT	Societe Industrielle du Titane
ICI	Imperial Chemical Industries, Ltd.
GW	Goodlass Wall and Lead Industries, Ltd.
ISC	Imperial Smelting Corporation
BTP	British Titan Products, Ltd.
NTP or Laporte	National Titanium Pigments, Ltd.
CIL	Canadian Industries, Ltd.
CTP	Canadian Titanium Pigments, Ltd.
Kokusan or KK	Kokusan Kogyo Kabushiki Kaisha
TK	Titan Kogyo Kabushiki Kaisha
Terres Rares	Societe de Produits Chemiques des Terres Rares
Thann	Fabrique de Produits Chemiques de Thann et de Mulhouse
Montecatini	Societa Anonima Titanium
Aussig	Verein fur Chemische and Metallurgische Produktion

2. RE refers to Exhibit Volumes of Record.

STATEMENT

The Proceeding

This is a civil action by the United States charging that defendants National Lead Company (NL), its wholly owned subsidiary Titan Com-

pany, Inc. (Tinc), and E. I. du Pont de Nemours and Company (DP), and certain non-defendant co-conspirators, were parties to a combination to restrain and monopolize interstate and foreign commerce in titanium pigments in violation of Sections 1 and 2 of the Sherman Act. The evidence introduced in support of the charges was mainly documentary. After hearing, the trial court rendered an opinion holding that the combination was in violation of Section 1 of the Sherman Act and stating that the United States was entitled to a decree "which will restore titanium to the system of free competition" (R. 222).[1]

The findings of fact (R. 234-306) state that defendants and their foreign co-conspirators were parties to an international agreement, necessarily affecting the interstate and foreign commerce of the United States in titanium pigments. Among these effects were that the defendants have refrained from exporting titanium pigments to certain foreign countries; that all foreign producers have refrained from exporting such pigments to the United States and from competing with the defendants in the United States; that the defendants have imposed restrictions on resales by purchasers of titanium pigments; that prices in the United

[1] The District Court did not deem it necessary to consider whether a violation of Section 2 had been proved (R. 203). That such a violation was proved seems clear. *American Tobacco Co.* v. *United States*, Nos. 18, 19, 20, 1945 Term, decided June 10, 1946.

States have been maintained at uniform levels; that defendants have restricted the production of their two domestic licensees to limit their competition; that defendants control and dominate the manufacture and sale of titanium pigments in the United States to the exclusion of all actual or potential competition from any other potential entrant into the business in the United States; that defendants have secured a monopoly on technical information relating to the manufacture and use of titanium pigments and certain apparatus and equipment necessary to the manufacture of certain titanium pigments to the exclusion and detriment of other producers now engaged in the titanium business in the United States; that defendants have utilized their patents relating to the manufacture and use of titanium pigments to control and regulate the manufacture and sale of such pigments in the United States; and that all of the patents of NL's foreign associates relating to the manufacture and use of titanium pigments have been and are available to DP on a royalty-free basis and similarly all of such patents of DP have been available to NL's foreign associates (R. 303–306). As will appear, another effect is that all of such patents of NL have been and are available to DP on a royalty-free basis and all of such patents of DP have been and are similarly available to NL.

The judgment of the trial court (R. 308–316) included provisions cancelling the agreements be-

tween the defendants and the agreements between NL and Tinc and their foreign co-conspirators found to be illegal (R. 310); and requiring NL and Tinc to submit a plan either for the divestment of their financial interests in the foreign co-conspirators or for the acquisition of the entire stock and other financial interest of the foreign co-conspirators (R. 314). The judgment further required the defendants to grant to any applicant, including any defendant or co-conspirator, a non-exclusive license at a uniform reasonable royalty under any or all patents now owned or acquired within five years relating to titanium pigments or the manufacture or use of such pigments. However, it permitted the defendants to condition the grant of such a license upon the reciprocal grant of a license by the applicant, at a reasonable royalty, under any or all patents owned or acquired within five years by such applicant. The judgment also provided that, for a period of three years, such license or reciprocal license may, at the option of either party, contain a provision for the imparting in writing at a reasonable charge by the licensor to the licensee of the methods and processes used by the former at the date of the license in its commercial practice under the licensed patents in connection with the production of titanium pigments. (R. 313-314.) The judgment also provided that the two present licensees of NL and DP might within

six months apply for licenses from NL and DP on the described basis (R. 314-315).

After the entry of the judgment, all the parties appealed to this Court. Upon the application of NL, this Court on January 2, 1946, suspended the operation of a portion of the judgment pending determination of the appeals.

The appeal by the Government (No. 89) attacks the provisions of the judgment relating to licensing of patents and imparting of technical information on the ground that the relief granted in those respects was insufficient. It also attacks the refusal of the trial court to grant a partial divestiture of the physical properties now owned and operated by NL and DP. (R. 330-331.)

THE FACTS[2]

Defendant NL has assets in excess of $100,-000,000. It is the largest manufacturer of titanium pigments in the world. In 1943, the last year for which figures are found in the record, NL produced 76.5% of the composite and 46.4% of the pure titanium pigments produced in the United States. (R. 236.) NL owns all of the stock of defendant Tinc, a holding company (R. 236). NL owns directly or indirectly through Tinc 99% of the stock of Titan Co. A/S (TAS); 49% of the voting stock of Canadian Titanium Pigments,

[2] This statement is taken in the main from the findings of fact (R. 234-306), which are not challenged by the Government.

Limited (CTP); 44% of the voting stock of British Titan Products Company, Limited (BTP); 50% of the voting stock of Titangesellschaft, g. m. b. h. (TG); 57% of the voting stock of Societe Industrielle du Titane (SIT); and 18.5% of the voting stock of Titan Kogyo Kabushiki Kaisha (TK), all of which are engaged in the titanium pigment business in foreign countries (R. 236–237, 242, 243).

Defendant DP has assets in excess of $1,000,000,000. It is the second largest manufacturer of titanium pigments in the world. In 1943 DP produced 23.5% of the composite and 45.1% of the pure titanium pigments made in the United States. (R. 237.)

Titanium pigments are manufactured from titanium, the ninth most abundant element on the earth's surface. Titanium is contained in ilmenite, which is found in the United States, Norway, India, Brazil, and elsewhere throughout the world. Titanium pigments possess great opacity, hiding power and chemical inertness, and are used in the manufacture of paints, rubber, glass, paper, vitreous enamels, and many other products. They are sold in competition with and are largely displacing other pigments such as lithopone and white lead. (R. 245–246.)[1] A quantity of titanium dioxide (TiO_2) is approximately three times as

[1] In 1943, the sales of titanium pigments by NL alone exceeded the sales in the United States of lithopone, zinc oxide and white lead by all producers (R. 273).

effective as the same quantity of lithopone (Ex. 4).[3a] Titanium pigments composed of titanium dioxide in a relatively pure form are described as pure pigments; those composed of titanium dioxide intimately mixed with one or more other pigmentary materials, as compounds or composite pigments (R. 378, 392). Composite pigments are commercially the most important and these have been subject to a 30% *ad valorem* import tariff since 1922 (R. 251).

Prior to 1920 there was no substantial trade or commerce in titanium pigments (R. 246). In that year the total production in the United States was 100 tons (on the basis of pure titanium dioxide content) and this increased to approximately 110,000 tons in 1943, with a peak production of approximately 128,000 tons in 1941 (R. 247). The total production of titanium pigments outside of the United States has shown much less growth, the estimated foreign production of titanium pigment being approximately 1000 tons in 1920 and 23,000 in 1938 (R. 247).

While there was no substantial commerce in titanium pigments prior to 1920, experimental work in this field had been carried on by chemists located in the United States, Norway, and France (R. 246–247). The American chemists, Barton and Rossi, had taken out important

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[3a] By stipulation between the parties Exhibit 4 was not reproduced but is a part of the record for all purposes (R. 360).

patents on processes and products largely for the manufacture of composite titanium pigments (R. 246). These patents had been transferred to Titanium Pigment Company, Inc. (TP), a corporation formed to engage in further research development and promotion in the pigment field (R. 246). During the same period Gustav Jebsen, a Norwegian chemist and businessman, perfected processes, patented in Norway, the United States, England, Germany, and in other countries, for producing relatively pure titanium dioxide pigment by direct application of sulphuric acid. While the Norwegian chemist was aware of the possibility of composite pigments, he had not perfected processes for the manufacture of such products. In 1920 the process and product patents of Jebsen and his associates were held by Titan Company A/S (TAS), a Norwegian company. (R. 246–247.) In or about 1922 Joseph Blumenfeld, a French chemist, obtained patents in the United States and foreign countries relating to the manufacture of titanium pigments. These were assigned to Societe de Produits Chemiques des Terres Rares (Terres Rares), a French corporation (R. 247, 243).

In 1920, NL, a manufacturer of pigments, purchased ten percent of the stock of TP with an option to purchase up to fifty percent (R. 246). Thereafter, in July 1920, TP, whose policies were then and thereafter controlled by NL, entered into an agreement with TAS (R. 239, 251). Its pre-

amble recited that each of the parties owned and would thereafter own certain patents and that each desired to obtain rights under these patents (RE. 1). The essential features of the agreement are:

(a) The "licensed field" was defined to include all substances containing above 2% of titanium (unless such substances contained by weight more than 5% of a metal other than titanium in its purely metallic state) and all apparatus, methods, and processes useful in obtaining or manufacturing such substances (except as stated). The intention was to cover processes, substances, and apparatus in the titanium and titanium compound field. (R. 251.)

(b) TAS agreed to grant to TP "upon the terms and conditions, including the covenants and agreements, hereinafter specified" and the latter agreed to accept "a license exclusive of all others including" TAS under all "existing or future" patents of the Norwegian company within the "Licensed Field"; but only in or for territories within North America (defined as including the continent of that name, Central America, and Panama); and TP agreed to grant to TAS upon the same conditions the correlative rights, but only outside North America, under the existing or future patents of TP. The parties agreed not to sell outside their respective territories, except that reciprocal non-exclusive rights of sale were reserved for South America. (R. 252, RE. 3-4.)

(c) Detailed provision was made for exchange of copies of applications for patents filed by the parties or their other licensees, and for the filing and payment of expenses incidental to the prosecution of such applications and maintenance of patents in territories outside the territory of each; and there was provision for assignment by each company to the other in case either party elected not to prosecute applications or maintain patents outside its territory (R. 252).

Neither party would ever question or contest the validity of any patent of the other under which it is licensed (within the licensed field) (R. 252).

(d) TAS made TP the exclusive agent of TAS for sales by TAS in North America, such sales to be at prices and on terms determined by the agent, and TP similarly made TAS its sole agent for sales by TP outside North America and South America. With a view to "the wildest possible development of titanium products in the 'Licensed Field,'" it was agreed that, notwithstanding the agencies provided for, importations of "finished articles"—that is, paint, paper, rubber, glass, etc.—containing titanium products of the principal, its licensees or sublicensees, would be permitted, provided such products did not constitute such an important part of such finished articles that sales within the agent's territory would substantially interfere with the agent's sales of its own titanium products. (R. 252–253.)

(e) Each party would impart semi-annually to the other full and accurate information in detail as to knowledge obtained in and applicable to the "licensed field," and would permit the other to inspect and study operations at its plants (exclusive of research laboratories) (R. 253).

(f) The reciprocal grants of exclusive licenses extended to December 31, 1936, and thereafter for periods of ten years each, with provision for termination by notice to be given at least five years before the end of any such period; and it was agreed that upon such termination each would receive for itself and its licensees within its territory a non-exclusive license under inventions covered by existing patents or applications of the other, but that in other respects the obligations, liabilities, and benefits would cease. (Notice of termination was never given.) (R. 253.)

(g) In Article XIV of the 1920 agreement (mentioned by number because of its significance in connection with later agreements) it was provided that each company would have the right, so long as it held an exclusive license from the other under the 1920 agreement, to grant licenses under its own patents and sublicenses under the other's patents on condition, nevertheless, that every such licensee or sublicensee would (i) grant to the party to the 1920 agreement other than its licensor its patent rights in the "licensed field" identical in character, territorial scope, and dura-

tion to those given by its licensor to the other party to the 1920 agreement, (ii) would appoint such other party its sole agent as specified above in respect to its licensor, and (iii) would impart technical information to such other party in the same manner and to the same extent as its licensor. (R. 254).

Simultaneously with the execution of this contract, NL entered into a contract with TAS and TP in which NL agreed to respect its provisions and to assign promptly to TP all patents, inventions, and improvements relating to titanium pigments which it then used or might thereafter acquire or which should be at its disposal throughout the world (R. 254).

The purpose and effect of these agreements were threefold: First, to promote the more rapid development of the business of NL and TAS by securing to each the right to use the processes and products covered by the patents held by the other, together with future developments and technological improvements and "know-how"; second, to keep these patent rights and technological know-how as the exclusive possession of the parties and their sublicensees; and third, to prevent competition in the industry on a world-wide basis (R. 254–255, 922, 924, 927–929, 968–981, RE. 3–7, 10–11, 13, 15–17, 798–802, 1436–1441, 2953–2955). It is significant to note, as the trial court pointed out, that the suppres-

sion of competition was not limited to patented articles or to articles produced by patented process but extended to all products within the "licensed field" (R. 191). Furthermore, no pretense was made of limiting restraints on the parties or on licensees to identified inventions or for the term of any patent. The restraints were co-extensive with all the operations of the industry and were to be maintained by the patent position created by the combination irrespective of the actual scope of the patents included in the pool.

In 1927, NL acquired control of TAS by purchasing 87% of its stock, Jebsen retaining the other 13% (R. 255, 240). NL made this acquisition for the purpose of utilizing TAS and the 1920 contract further to control competition in all markets of the world including the United States. The plan for accomplishing this purpose was as follows: TAS was to form in each of the important industrial countries, in association with a local company which contemplated the manufacture or sale of titanium pigments or which could contribute to the commercial or technical development or which threatened to be a serious competitor of NL or TAS, a new company in which NL or TAS was to have a part interest. Each company so formed was to be given as its exclusive territory a portion of the territory assigned to TAS by the 1920 agreement and was to

refrain from competing with NL in its exclusive territory or in the exclusive territory of any other company associated with NL. All of the present and future patents belonging to NL or TAS or any of the companies associated with either in the formation of such new companies, as well as those of the new companies to be organized, were to be licensed exclusively to NL for North America and to the new companies to be organized for their respective territories and to TAS for the rest of the world. (R. 255–256, BE. 637, 646, 653, 660, 661, 607–610, 619–621.)

The purpose of NL further to control competition was accomplished by a series of agreements entered into pursuant to this plan (R. 255). The first of these agreements was entered into in 1927 by TAS and Societe Industrielle du Titane (SIT), a French corporation. By this agreement SIT was given as its exclusive territory France and its territories except those appurtenant to North and South America. TAS owned about 20% of SIT and NL acquired an additional 58%. (R. 256, 241.)

NL regarded IG Farbenindustrie Aktiengesellschaft (IG), one of the largest chemical companies in the world, which had tried to acquire TAS in 1927, as either a potentially invincible competitor or the most powerful ally (R. 257, 255, 240). NL, therefore, through TAS, made IG an ally. TAS agreed with IG to form Titan-

gesellschaft (TG) to which was granted as its exclusive territory Germany, Russia, Austria, Hungary, Czechoslovakia, Switzerland, Rumania, Serbia, Croatia, Slovenia, Bulgaria, Greece, Turkey, Japan, China, and Spain. IG agreed to engage in the titanium pigment business only through TG. IG further agreed to transfer exclusively to TG all its patents, methods and experience relating to the manufacture or use of titanium pigments within the "licensed field." TG and TAS agreed to engage in the business only in the territory assigned to them and to exchange know-how. TG and TAS agreed that each might grant sub-licenses under the licensed patents and to exchange know-how with such sub-licensees (R. 257–259). IG and TAS each acquired 50% of the stock of TG (RE. 51–52).

In 1933, NL and Tinc, the successor to TAS,[4] became apprehensive over the threatened competition of Imperial Chemical Industries, Limited (ICI), the largest manufacturer of chemicals in the British Empire, and Goodlass Wall and Lead Industries (GW), the largest producer of lead pigments in the British Empire (R. 259,

[4] NL organized Tinc in 1929. Tinc became NL's corporate pocket for its holdings in foreign titanium enterprises. Tinc assumed all of the obligations of TAS and succeeded to all the benefits running to TAS under the 1920 agreement and the French and German agreements of 1927. NL owned 87% of the stock of Tinc until 1944 when it acquired the remaining 13%. (R. 255, 236, 237.)

241). Therefore, NL and Tinc entered into negotiations with ICI, GW and Imperial Smelting Corporation (ISC), one of the largest producers of pigments in the British Empire, which resulted in the formation of British Titan Products Company, Limited (BTP) and the assignment to it as its exclusive territory of the British Empire exclusive of portions within or appurtenant to North and South America. Tinc agreed not to conduct any operations relating to the manufacture or sale of Titanium pigments within that territory, and ICI, GW, and ISC agreed to conduct all of their operations of that nature anywhere only through BTP which in turn agreed to confine its operations to the territory assigned to it. ICI, GW and ISC further agreed to grant BTP exclusive licenses under all of their patents within the "licensed field." Tinc and BTP agreed to exchange exclusive licenses under their existing and future patents for their respective territories with the right to grant sub-licenses on a reciprocal basis. Each agreed also to exchange know-how. Tinc acquired 49% of the stock of BTP and each of the three British companies acquired 17% (R. 259–262, RE. 725–827, 833, 861).

Prior to 1936 certain Japanese companies were planning to enter the industry. NL, Tinc, IG and TG believed that these companies would export which would lead to competition in all of the markets of the world including the United

States. Therefore, Tinc, IG, TG, and companies operating under the Blumenfeld patents (for reasons which will appear later) entered into an agreement with Kokusan Kogyo Kabushiki Kaisha (KK), the largest manufacturer of paints in Japan, to form a new company, Titan Kogyo Kabushiki Kaisha (TK) to which was allocated as its exclusive territory the Japanese Empire. The agreements with TK were substantially similar to the 1920 and subsequent agreements. Tinc acquired 35% of the new company with IG having an option to purchase one-half of Tinc's share. (R. 264–266, 978–979, RE. 1544–1547; 2313–2338, 2346–2351.)

Under the 1920 agreement, Canada had been allocated to NL as part of its exclusive territory (R. 266). Prior to 1934, National Titanium Pigments, Limited (Laporte), a licensee under the Blumenfeld patents, was interested in erecting a titanium pigment factory. In 1937 NL and Canadian Industries, Limited (CIL), which is owned substantially by DP and ICI,[5] formed a new company, Canadian Titanium Pigments, Limited (CTP), through which NL and CIL agreed to conduct their titanium business in

[5] DP owns 45% of stock of CIL (RE. 2441). ICI owns 45%. DP sold its titanium pigment products in Canada prior to the creation of CTP to CIL and since the creation of CTP entirely to CTP (R. 270). DP and ICI had an agreement which provided that CIL would be used as the proper vehicle for cooperation in Canada (RE. 958).

Canada.[6] NL granted CTP, for Canada, an exclusive license under its present and future patents. CTP granted NL, for the rest of the world, an exclusive license under its present and future patents, with the condition that NL grant DP a nonexclusive license under them for North and South America. NL and CTP agreed to respect each other's territory. CTP then acquired the Canadian titanium business of Laporte with Laporte covenanting not to engage in the business in Canada until 1952. NL acquired 49% of the voting stock of CTP upon its formation (R. 267–270).

The intended effect of all of these agreements has been (1) to prevent among the parties competition in the licensed fields within the exclusive territory assigned to each; (2) to create a world-

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[6] CIL agreed with NL that both companies would engage in the titanium pigment business in Canada only through CTP, and CIL agreed with NL not to deal in or manufacture titanium pigment anywhere in the world except at the request of CTP (R. 267–268). Prior to the execution of this contract, NL agreed with CIL, BTP and Laporte to maintain prices on American titanium pigments sold by NL in Canada above the prices charged for titanium pigments manufactured by BTP or Laporte and sold by BTP and Laporte in the Canadian market. This facilitated a price agreement between BTP and Laporte for the British Empire market outside of Canada. (R. 269.) Although the district court refused to find it as a fact, the record shows that on January 4, 1935, NL advised BTP by cable that American titanium *producers* would maintain Canadian prices on the foregoing basis (RE. 2436). DP and NL were the only American producers of titanium pigments at that time.

wide patent pool of many of the patents of commercial value relating to the manufacture of titanium pigments within the licensed fields in which the patents are available only to the parties; (3) to create a world-wide pool of technical information available only to the parties, the information being of inestimable value in developing the business of the parties to the exclusion of potential newcomers in the industry (R. 272, 271); and (4) to prevent entirely any patent litigation among the parties. There has been no patent litigation in the titanium pigment field anywhere in the world. Access to patent rights and technology in the industry has been only on terms established by the combination.

It has already been stated that Blumenfeld, the French chemist, had assigned his titanium pigment patents to Terres Rares (R. 247). Between 1922 and 1933, the latter granted exclusive licenses for specified territories to Fabrique de Produits Chemiques de Thann et de Mulhouse (Thann), a French company, Societa Anomina Titanium (Montecatini), an Italian company; Verein fur Chemische und Metallurgische Produktion (Aussig), a Czechoslovakian company; Laporte, a British company. The Commercial Pigment Company (CP), an American company (R. 273, 239) purchased the Blumenfeld patents in the United States. The Blumenfeld group were the only other principal producers and sellers of titan-

ium pigments in the world (R. 248), and they were in competition with the NL group (NL, TAS, SIT, TG, BTP and Tinc) in Europe, the British Empire (R. 273) and the United States (R. 239). NL desired to eliminate this competition and facilitate exchange of patent rights and technical information between the two groups in all markets of the world (R. 277). Negotiations between the NL and Blumenfeld groups to accomplish this objective were begun in 1930. (R. 277, 278).

By March 1931, a tentative understanding had been arrived at between NL's foreign associates and the Blumenfeld interests relating to markets outside the United States, an understanding which embodied both commercial and technical cooperation. The parties believed, however, that no agreement eliminating competition between the two groups in markets outside the United States would be effective unless they were secure against competition from American producers. (R. 277.) Since NL was prevented from exporting by the various agreements discussed above, CP remained the only other United States producer which might upset the world-wide plan by exporting titanium pigments. Through an agreement (Ex. E. R. 69) between TP and CP's successor (Krebs Pigment and Color Corporation [Krebs] at that time owned 70% by DP), the provisions of which will be discussed later (*infra* pp. 26–29), and assurances from DP, NL's foreign associates and the Blumenfeld representatives received adequate

assurances that there would be no exports from the United States (R. 280–289), after which NL's foreign associates and the Blumenfeld Companies entered into specific written agreements which brought under control of the parties thereto any competition theretofore existing in titanium pigments in all markets outside the Western Hemisphere (R. 273–277).

The first of these agreements (all of which Jebsen, acting for Tinc, either made or approved (R. 273)) was the TG-Aussig agreement of November 1933 (R. 274), which established sales quotas for the two companies for a specified territory, regulated prices, provided for the exchange of certain patents royalty-free, and required that both parties refrain from giving any technical information or aid to potential competitors. Aussig agreed to purchase from TG at preferential prices any requirements of titanium pigments, above Aussig's then production capacity, which it might need to meet its quota. A second agreement, the Contrat a Quatre, was executed in 1935 (R. 274), but to take effect as of May 1934 between SIT and Tinc on one hand and Thann and Terres Rares on the other. Here, also, sales quotas for specified territories were established, prices were regulated, certain patents were exchanged royalty-free, and assistance was to be withheld from potential competitors. The Contrat de Livraisons (R. 275) was executed at the

same time by the same parties; and provided that each group would supply the other at fixed prices with any titanium pigments which it might have available after its own needs were satisfied. Titanium pigments so supplied could not be re-exported by the parties or their customers. The Contrat a Six (R. 275) was also entered into at this time by Thann, Terres Rares, Montecatini Tinc, SIT, and TG. The parties' exclusive rights of sale in specified territories were recognized;[7] sales were allotted for these territories on a quota basis; third parties were to be prevented from entering the titanium pigment business within any of the territories; sales prices were to be fixed by mutual consent; certain patent rights were to be exchanged royalty-free.

The British Empire was not included within the above agreements. It will be recalled that Laporte was the Blumenfeld licensee for the British Empire (R. 273), and was obligated under its agreement with Blumenfeld to refrain from exporting outside this territory (R. 277). In 1934 BTP and Laporte entered into a price agreement for the British Empire, and in 1941 they executed a quota agreement, allocating to each a specified share of the titanium pigment business in the British Empire (R. 276). This

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[7] Under the Contrat a Six, Terres Rares and Thann were recognized, together with TG, as having exclusive rights of sale in Japan. It was for this reason that the Blumenfeld companies were given a share in the Japanese company, TK, organized in 1936 (R. 265).

did not include Canada, since Laporte withdrew from the Canadian market in 1937 in favor of CTP (R. 269).

These agreements between the foreign associates of NL and Blumenfeld were intended to help NL and Tinc prevent any exports to the United States. This intention was achieved. There have been no exports to the United States by any of Blumenfeld's foreign associates (R. 277, 289, 790–793, 825, 979–980, RE. 706, 1068, 1224, 1264, 2045, 2061–2063, 2081, 2288–2292, 2915–2916).

The agreement with DP[8] and NL in 1933 (Ex. E) which removed the obstacles to the agreements between the foreign associates of NL and the Blumenfeld companies followed negotiations initiated in 1930 between NL and CP, then the only two producers of titanium pigments in the United States (R. 277, 278). In July 1931, the business of CP was acquired by Krebs, a corporation 70% of whose stock was owned by DP (R. 238).[9] Thereafter, negotiations were instituted between NL and Krebs which culminated in the agreement (Ex. E) between TP and Krebs in August 1933

[8] DP, one of the largest lithopone producers, was aware of the threat of titanium pigments to its lithopone business. It had, therefore, prior to 1930, attempted to make some arrangement with NL which would permit it to enter the industry.

[9] DP acquired the remaining 30% in 1934. In 1935 DP acquired all the assets and assumed all the obligations of Krebs and, thereafter, operated the properties through the Krebs Division of DP (R. 238).

(R. 280). Its preamble recited that each desired to obtain from the other "a license of the character and scope and upon and subject to the terms and conditions hereinafter set forth" (R. 69). The essential provisions of this agreement are:

1. The licensed field is defined as "(1) All methods, processes and apparatus in the field of manufacture and use of all titanium compounds containing two per cent (2%) or more of the element titanium in a chemically, mechanically or physically combined state, and mixtures thereof, which can be used as pigments, whether or not adapted for other uses, and (2) all such titanium compounds and mixtures which can be used as pigments, whether or not adapted for other uses" (R. 281).[10]

2. TP granted Krebs (a) a non-exclusive license to use within the United States, its colonies and possessions, and for the licensed field, all processes and apparatus of manufacture, patented or not, which it then used or thereafter used during the term of the agreement, and as to which it was free to grant such license; (b) a non-exclusive license to exploit within the same territory and for the licensed field all United States patents then or thereafter owned by it during the term of the agreement; and (c) a non-exclusive license to sell the products resulting from

[10] The definition of "licensed field" was subsequently amended specifically to include extender pigments, theretofore included by implication and practice (R. 290).

such processes in the United States, its colonies and possessions, Mexico, Central America, West Indies and South America (R. 281).

3. Krebs granted the identical rights to TP (R. 281).

4. Both parties agreed to exchange technical information, including patent applications and the aims and results of their research and development work (R. 281).

5. Each party agreed to help the other obtain a non-exclusive license for the mentioned territory under any United States patent under which the other was licensed (R. 281).

6. Krebs agreed to give TP's foreign associates the first opportunity to acquire from Krebs a non-exclusive license under any patent issued in Europe or Great Britain within the license field, at the disposal of Krebs (R. 282).

7. The contract was subject to cancellation after December 31, 1933, on three years' notice (R. 282).

8. The parties released each other from claims for infringement of the United States patents then owned or thereafter acquired, during the term of the agreement, with right to sue for past infringement. Each of the parties also released the customers of the other from past infringement claims. (R. 282.)

9. Mutual royalties which could not exceed a total of $40,000 by either party were provided for and no royalties were to be paid by either

party after 1936. (And such royalties were paid.) (R. 282.)

Before this agreement could be executed, it was necessary to secure the approval of NL's foreign associates. IG objected to the proposed agreement because it did not comply with the requirements of Article XIV of the 1920 agreement (R. 282). However, IG withdrew its objection upon the receipt of assurances from DP, and the agreement was approved by IG, Tinc and NL's other foreign associates (R. 287–288). These assurances, which related to the protection of IG in its exclusive territory and the grant of licenses, exclusive in effect, to NL's foreign associates, formed in part the consideration for continued abstinence of the European producers from exporting to the United States (R. 287–288). As a result of them, DP became a party to the worldwide combination (R. 289).

The purposes of NL and DP in entering into their agreement were in some vital respects similar. NL was concerned by the early expiration date of many of the patents upon which it relied. By exchanging patents and technology with DP, a large and powerful corporation possessed of great research facilities, NL expected to strengthen the patent position of NL and DP jointly as against newcomers to the industry. NL also expected to obtain the benefits of a friendly competitor rather than the disadvantages of a hostile competitor. (R. 291–292.)

DP desired to obtain access to the patents and technical experience of NL and its foreign associates, and to strengthen its patent position to the exclusion of others than NL (R. 292). The necessary effects of the agreement have been the achievement of each of these purposes and to give NL and DP together domination and control over the titanium business in the United States, to proliferate patents, and to restrict and obstruct imports into and exports from the United States (R. 292–293). The agreement in substance coincided with the "licensed field" of the 1920 agreement, and also operated on the industry as a whole without respect to the life or scope of any particular patent.

From August 1933 to January 1, 1941, all patents and patent applications within the licensed field owned or filed by TP, NL, Krebs or DP were immediately available to each of them. After January 1, 1941, patent applications were so available only after six months from the date of filing (R. 290). In addition to the patents and applications owned or filed by TP or NL, the patents and applications of NL's foreign associates have also been available to DP (R. 306). Since 1936, all of these patents and applications have been available to NL and DP on a royalty-free basis (R. 282, 303, 306).[11]

[11] DP refused to make a written general agreement for the exchange of licenses on present and future patents between itself and NL's foreign associates because of the United

NL now claims to own or control or be exclusively licensed to use 145 United States patents and applications in the licensed field.[12] In addition, it is licensed to use 186 DP patents and applications. Of the total of 331, NL uses 66 or approximately 20% (R. 250). DP owns 206 patents and applications and is licensed to use 123 patents and applications of NL or its foreign associates. Of the total of 329, DP uses only

States antitrust laws. An oral understanding was reached between DP and NL's foreign associates on June 8, 1938, whereby each of said parties agreed to exchange such of its patents and applications as related to the manufacture and use of titanium pigments within the licensed field of Exhibit E with each other as might be desired by each from the other. In accordance with said oral understanding DP granted royalty-free licenses to Tinc with the right to sublicense NL's foreign associates on June 20, 1938, April 21, 1939, May 10, 1940, and June 23, 1941, and continued to make available to NL's foreign associates, on a royalty-free basis, all patent applications filed by it in the United States relating to the manufacture and use of titanium pigments until a short time before the transmission of such applications was made dependent on the securing of Governmental permission. NL's foreign associates acting in accordance with said oral understanding made all of their U. S. patents and patent applications available to DP via Tinc. This was accomplished through cross-license agreements entered into annually between DP and Tinc on the above dates. (R. 300–302.)

[12] These 145 patents and applications include some transferred to Tinc by TG under the following circumstances: After the outbreak of war in 1939, NL, Tinc and TG believed that if the United States and Germany should declare war, the United States Alien Property Custodian might seize TG's United States patents and the German Government might seize Tinc's German patents, and license them to out-

about 70 or approximately 20% (R. 250–251). The validity of none of these patents has ever been passed upon by any court (R. 249).

NL and DP began exchanging extensive technical information relating in any manner to the manufacture and use of titanium pigments in 1932 while the negotiations leading to the TP-Krebs written agreement (Ex. E) were still in progress (R. 279–280, 289). This exchange continued until May 1940 (R. 289) at which time the titanium pigment business was a mature industry (R. 305). From August, 1933, to September, 1938, DP and NL's foreign associates

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siders who might compete with the companies in their respective territories. Therefore, NL, Tinc, IG and TG, in order to prevent this potential competition, decided that all of TG's United States patents should be transferred to Tinc, and Tinc's patents in TG's territory should be transferred to TG. Thereupon TG assigned to Tinc some of its United States patents and applications, and Tinc endeavored to reciprocate with respect to its patents in TG's territory. (R. 271.) Thirty-two of the 145 patents and applications were vested by the Alien Property Custodian and are now held by the Attorney General, as his successor. The Attorney General, as successor to the Alien Property Custodian, is not a party to this action and no issue as to his title or his right to administer these patents is involved herein. In view of the district court's special enumeration of the patents vested by the Custodian (R. 320), we do not read the judgment as applicable to them. It is important that the decision of this Court should be without prejudice to the rights and interests of the Attorney General in and to the vested patents or to the jurisdiction of the district court, upon application, to clarify its decree with respect to such rights and interests.

permitted each other to visit their plants and to obtain complete technical information relating to plant operation and equipment. After 1938, DP permitted plant visits from NL's foreign associates but research and development information was excluded from the exchange: (R. 278–299, RE. 1540, 1848–1855, 1898, 1990, 3009, 3086–3095.)

The exchange of information between NL and DP which commenced in 1932 before their agreement was signed was not confined merely to alleged claims of patent infringement or even to what is generally regarded as "know-how" essential to operate under patents. Rather, complete details of plant operation were disclosed to the minutest detail. Information was even exchanged on personnel matters relating to wages, vacations, types of clothing worn, health facilities and safety measures, as well as information on more technical matters such as ore storage and milling, packing, bleaching, wet grinding, pigment washing, materials and supplies consumed, production of waste heat boilers, method of determining iron in titanium dioxide, method of determining tinting strength and consistency of pigments, factors determining the temperature of exit gas, installation of equipment, advantages of certain types of castings and bolts, and a number of other items (RE. 1290, 1878–1885, 1901–1925, 3651–3731).

Neither NL (except as indicated below)[13] or DP have exported titanium pigments to the territory of TG, BTP, SIT, TK, Terres Rares, Thann, Aussig, or Montecatini (R. 289, 303–304) and these companies have not imported such pigments into the United States (R. 289, 304). NL, DP and Tinc have imposed contractual restrictions on resales by purchasers of their pigments, but the court below found that, except as to the years 1940 and 1941, the evidence did not establish that the restrictions imposed by DP were pursuant to an agreement with NL (R. 304, 294).

NL and DP have endeavored to match each other's titanium products, but each manufactures some product having special applications not manufactured by the other (R. 291, 1072–1074, 1149). There is active competiton between NL and DP for customers (R. 290), on the basis of endeavoring to demonstrate that their products merit acceptance because of technical superiority (R. 291). There is no price competition, however. NL and DP sell similar products at identi-

[13] When the war started in Europe in 1939 it became impossible, due to supply shortages and shipment difficulties, for NL's foreign associates to take care of sales in all the countries within their territories. The parties agreed, therefore, that NL and Tinc, upon the request of their associates, would serve the markets allocated to the latter, only for the duration of the emergency, and profits derived by NL and Tinc from the markets so served would be held in trust for the associate in whose market the sales were made. (R. 305, RE. 3338–3416.)

cal prices (R. 291). The trial court found no evidence that such price identity is the result of agreement (R. 291), but did find that an effect of the combination was to maintain prices at a uniform level (R. 304). Since 1927 there have been repeated reductions in prices with few price increases but the trial court stated that it was unable to find whether there was a causal relationship between the increased production at decreased prices and the contracts of NL with its foreign associates (R. 272–273).

An example of the close cooperation that existed between NL and DP is found in the situation relating to the Micronizer Reduction Mill, a patented machine used to improve the texture of titanium pigments (R. 293). NL obtained an exclusive license to use this machine in 1939 from the International Pulverizing Corporation. The machine proved of great value, and DP regarded this apparatus as essential to enable it to manufacture a pigment comparable to the pigment produced by NL by use of the apparatus. NL granted DP a sublicense to use the machine at about the same time that NL obtained its license from the International Pulverizing Corporation. This sublicense was granted pursuant to the 1933 TP-Krebs agreement. It was not until about 18 months later and at the request of the International Pulverizing Corporation (RE. 1832, 1833) that NL also granted a sublicense on the machine

to Zirconium. NL refused to sublicense the apparatus to Virginia Chemical and to the Sherwin-Williams Company. (R. 294; RE. 1834–1840.)

Another instance of NL–DP cooperation is found in their joint purchase, in 1934, of the Leuchs patent, with each company contributing half the cost. Shortly thereafter, DP purchased NL's half interest and gave NL a non-exclusive royalty-free license. NL's technical director believed that the patent was invalid, but he thought it might anticipate a Blumenfeld patent. (R. 293.)[14]

NL and DP have also cooperated on many occasions by furnishing to each other certain types of titanium pigments and much needed ilmenite (RE. 1548–1560).

The only companies other than DP and NL producing titanium pigments in the United States are American Zirconium Corporation (Zirconium) and Virginia Chemical Corporation (VC) (R. 251). Zirconium commenced the manufacture of titanium dioxide in 1934 under patents which it had acquired from its parent corporations, the Glidden Company and Metal & Thermit Corporation (R. 295). Early in 1934 both NL and DP notified Zirconium of probable infringe-

[14] DP acquired the Blumenfeld patents in the United States when it acquired the assets of CP in July 1931 (R. 238). The Leuchs patent U. S. No. 1,853,626 was never used commercially by either DP or NL but was among the patents named in the NL and DP licenses to Zirconium (RE. 261, 289).

ment of their respective patents. Negotiations between NL and Zirconium and DP and Zirconium relating to license agreements followed. (R. 295.)[15] The negotiations between NL and Zirconium resulted in an agreement entered into on May 6, 1935 (R. 295) whereby the parties cross-licensed each other under all present and future patents in the licensed field. Zirconium was required to assume obligations substantially like those in Article 14 of the 1920 agreement, including restrictions on its exports (R. 296). The agreement also provided for an exchange of technical information. NL rendered some engineering assistance to Zirconium and imparted some technical information, but it frequently refused to convey such technology on the ground that other agreements prevented it from so doing (R. 295-296).[16] In lieu of royalties NL received 10 percent of Zirconium's stock and its president was elected to Zirconium's board of directors (R. 295).

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[15] In the spring of 1935 there was a conversation between Rupprecht for DP and Beschorman for NL respecting Zirconium's patents (R. 296, 845). The DP-Zirconium license was executed on August 10, 1935 though dated January 1, 1935 (RE. 282).

[16] In 1939 Zirconium advised NL of its concern over the fume nuisance created in their operation of the Washburn patents licensed from NL. Zirconium requested permission to witness the operation in NL's plant of the process covered by those patents. NL advised Zirconium that NL's agreements with others prevented them from granting such permission. The inspection was never made (RE. 1718-1727).

The DP and Zirconium negotiations resulted in an agreement signed in August 1935 under which DP granted Zirconium a non-exclusive license under specified patents subject to royalties on titanium dioxide produced (whether or not under DP's patents) and subject to a quantity limitation on the amount of titanium dioxide that Zirconium might produce. Its production was limited to 3,000 tons in 1935 and graduated to 9,000 tons in 1944 and thereafter. (R. 295.) Zirconium produced only pure titanium dioxide and its total production from May 1935 to July 1944 was 33,677 tons (R. 296). On many occasions since the licenses Zirconium has purchased titanium dioxide from NL and DP (R. 1146). Before 1940 NL and DP occasionally exchanged information relative to Zirconium's production (R. 296). Zirconium paid DP approximately $200,000 in royalties (R. 295).

In April 1944 the NL-Zirconium agreement was cancelled and in November of the same year the tonnage limitation provision of the DP-Zirconium agreement was cancelled on the recommendation of DP's legal department (R. 295–296).[17]

VC was organized in 1935 to manufacture titanium pigments and owns certain patents relating to their manufacture and use (R. 245). Late in 1936 and early in 1937 DP and NL re-

[17] The investigation of this industry was initiated in 1943 and antedated the filing of the Complaint in June 1944 (R. 263). NL and DP were, of course, aware of the investigation.

spectively discussed with Virginia Chemical the possibility that the latter might be infringing their titanium pigment patents. The negotiations which followed resulted in agreement between DP and VC executed in August 1937. (R. 297.) The provisions of this agreement were substantially the same as those of the DP-Zirconium agreement. DP granted a non-exclusive license under enumerated patents subject to a royalty payment on all titanium dioxide produced by VC and subject to graduated quantity limitations on VC's production ranging from 3,000 tons for the first year to 9,000 tons in 1946 and thereafter. VC manufactured only pure titanium dioxide and its total production from August 1937 to July 1944 was 36,576 tons. Like Zirconium it paid DP approximately $200,000 in royalties to July 1944. (R. 297.) It purchased titanium dioxide from DP (R. 1146). In November 1944 DP cancelled the quantity limitation provision of the agreement on the recommendation of its legal department (R. 297).

The NL and VC negotiations did not result in an agreement. NL explained to VC its obligations under Article XIV of the 1920 agreement whereby it woud be compelled, among other things, to obligate VC not to compete with the foreign associates of NL. NL was concerned about "the manner of expressing" the obligation it would have to impose on VC if an agreement were en-

tered into. NL communicated with its foreign associates and it was decided that "in the present case" a verbal understanding relating to exports by VC would not be acceptable to the foreign associates (R. 297–298). NL never instituted any action against VC to enforce its claim of infringement (R. 298).

SUMMARY OF ARGUMENT

The defendant's complete control of the titanium industry was acquired by an unlawful combination of patents including those controlling the three originally independent and competing lines of development, by deliberate extension of patents to control the unpatented, by a monopoly of technology, and by agreements of foreign producers not to export to or compete within the United States. Unlawfully operating outside the system of competition the Sherman Act was designed to protect, the defendants have been able to develop an industry pattern, the chief characteristics of which are the concentration of the industry in their hands, complete absence of competition from foreign producers, and uniform prices in the domestic market.

The judgment of the district court permits the existing industry concentration and marketing patterns to continue largely undisturbed. Since the judgment does not neutralize the power by which defendants control the industry, as is re-

quired by the decisions of this Court, it is inadequate to restore the industry to the system of free competition.

I

A. Defendants are required by the district court's decree to grant licenses under their patents to any applicant subject, however, to the payment of reasonable royalties. This provision is inadequate antitrust relief not only because it attempts to give continued vitality to otherwise unenforceable patents but permits defendants to exact a toll from all who would compete with them. Unless defendants are deprived of this power, potential competitors who are already at a serious competitive disadvantage are additionally handicapped to a point where the availability of these patents to them is rendered largely illusory. "Reasonable" royalties amount to a double subsidy to defendants in that defendants would derive profits from all licensees' sales whereas licensees must absorb an additional item of cost not borne by defendants. A decree permitting the defendants to charge royalties leaves in their hands the fruits of their illegal conduct. Since defendants have abused the right to collect royalties as well as the right to exclude, traditional concepts of adequate antitrust relief require that defendants be enjoined from charging royalties for, or otherwise enforcing, the misused patents.

B. The practical difficulty of determining reasonable royalties renders such relief unworkable. The evaluation of patents imposes upon courts "an onerous and absorbing administration burden" for which the courts are not equipped. The fixing of a royalty which will at the same time reward the patentee and instill competition into the industry requires judicial regulation of the future economics of the industry, incompatible with the system of free enterprise.

C. Domination of the titanium industry by defendants has been achieved and maintained primarily by consistent misuse of an aggregation of patents. Such misuse has consisted of the deliberate extension of the several patent monopolies beyond the terms of the authorized grants.

That patents so misused should be rendered unenforceable is compelled by established principles applicable under the patent laws as well as under the antitrust laws. The patent privilege is limited to the invention and any extension beyond the invention renders the patent unenforceable. Protection of the system of free enterprise is the basic rationale of the patent decisions of this Court whether the issue be that of indefinite claims, claims encompassing more than the invention, failure to comply with the disclaimer or reissue statutes, or misuse of patents after issuance. Since the purpose of the antitrust laws, is, also, the protection of free

competitive enterprise, the relief granted by the Court in public proceedings under the Sherman Act must be no less than that accorded to private patent litigants.

D. The decision in *Hartford-Empire Co.* v. *United States*, 323 U. S. 386, is inconsistent with the above principles since it proceeds upon the apparent assumption that equity may not grant adequate relief if the result is destruction of property values. However, traditionally under the patent statutes, the privilege is lost through deliberate attempts to extend the patent privilege beyond the authorized grant, and apart from the decree, defendants here could not enforce their patents because of their misuse. An antitrust decree prohibiting enforcement, therefore, does not confiscate anything of value. Instead of being inconsistent with the defendant's rights under the patent laws, this result is compelled by principles which both the patent and antitrust laws have in common. Furthermore, it is well established that, although equity may not go out of its way to impose penalties, it has power to grant effective relief even though the result may impair property values.

Since defendants' unlawful conduct has established a combination of patents, in place of competition between three originally competitive lines of patents, and has extended patents beyond their authorized scope, it is now impossible to segregate lawful patent values from the values resulting

from defendants' misconduct. Accordingly, as has been determined in similar situations under the patent and antitrust laws, defendants are not entitled to continued enforcement of the abused privileges.

The defendants' patents should be rendered unenforceable for the remaining period of the several grants since the consequences of misuse can never be dissipated while royalties continue to be paid. A decree allowing defendants to reinstate their patents at some future date will inhibit the introduction of new competition.

II

The decree permits the defendants to license their patents upon the condition that the licensee grant them licenses under any patents the licensee now owns or may acquire within five years. Under this provision a competitor who wishes to use a single patent of a defendant must surrender licenses under every patent it owns or acquires within five years. The cumulative effect of these surrenders is to create a pool of patents available to defendants but unavilable to every non-defendant, although only the defendants have violated the law. The provision, therefore, strips competitors of the only competitive advantage they may possess during the crucial five year period while at the same time increasing the already overwhelming competitive advantages of

the defendants. The provision should be eliminated in order that competition in the industry not be forestalled.

III

The district court found that the defendants had acquired a monopoly of the technology of the industry to the detriment of competitors. The judgment, however, limits access to this technology only to licensees of the defendants upon payment of a reasonable charge and only to the extent that it relates to the methods and processes used by the defendant licensor in its commercial practice under a licensed patent or patents. The effect of this provision is to exclude competitors from the general technology of the industry; from the technology necessary to produce unpatentable or unpatented products not produced by a patented process or apparatus; from the technology necessary to the practice of the inventions embodied in expired patents, among which are the basic patents of the industry; and from the technology necessary to practice the invention embodied in any patent not put into commercial practice. The result of this exclusion is to permit the defendants to continue to retain for themselves the technology necessary to produce products falling within the "licensed field", and therefore, within the trade and commerce restrained.

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IV

Defendants du Pont and National Lead producing 100% of composite and 90% of pure titanium pigments produced in the United States, acquired domination and control as a result of the unlawful conspiracy. Possessing competitive advantages of tremendous size and capacity, assured sources of raw materials, the cumulated experience and technology of major producers here and abroad, extensive research facilities, trained personnel, established trade connections and good will and probably much lower production costs than other American small producers, defendants National Lead and du Pont have the power to suppress competition of others. This power cannot be neutralized except by partial divestiture of their plants. The power of the Court to order partial divestiture is not limited to cases of fusion. Where this Court has ordered divestiture it has recognized that a competitive industry cannot be restored merely by enjoining the future conduct of units which have unlawfully controlled it, where such units have become so much greater in size than their potential competitors that they may continue to dominate the market by lawful methods of operation. Where such domination has been jointly achieved by two or three large units continued enjoyment of their dominant market position, even acting individually, should be prevented by a divestiture sufficient to assure elimina-

tion of that position. Otherwise continued concentration of economic power in the hands of a few industrial giants who have demonstrated a clear intention to abuse such power may not be eliminated by Sherman Act suits. If the Act was not intended to eliminate such power, then the Court's recent condemnation of it in *United States* v. *American Tobacco Company* has no effective meaning.

ARGUMENT

INTRODUCTION

A. THE FUNCTION OF AN ANTITRUST JUDGMENT

Each case under the Sherman Act stands upon its own facts and the judgment must be moulded to the exigencies of the particular case. *United States* v. *Union Pacific R. R. Co.*, 226 U. S. 470, 474; *United States* v. *Crescent Amusement Co.*, 323 U. S. 173, 185. It should be designed effectively to dissolve the unlawful combination, neutralize its continuing effects, and prevent its recurrence. *United States* v. *Trans-Missouri Freight Assn.*, 166 U. S. 290, 308; *Standard Oil Company* v. *United States*, 221 U. S. 1, 77–78; *Local 167* v. *United States*, 291 U. S. 293, 299; *United States* v. *Bausch & Lomb Co.*, 321 U. S. 707, 726; and *United States* v. *Crescent Amusement Co.*, 323 U. S. 173. Any doubts in framing its provisions should be resolved against the wrong-doers and in favor of those the Act seeks to protect. *Local 167* v. *United States*, 291 U. S. 293, 299.

In the *Standard Oil* case this Court said (221 U. S. at pp. 77–78):

> It may be conceded that ordinarily where it was found that acts had been done in violation of the statute, adequate measure of relief would result from restraining the doing of such acts in the future. *Swift v. United States,* 196 U. S. 375. But in a case like this, where the condition which has been brought about in violation of the statute, in and of itself, is not only a continued attempt to monopolize, but also a monopolization, the duty to enforce the statute requires the application of broader and more controlling remedies. As penalties which are not authorized by law may not be inflicted by judicial authority, it follows that to meet the situation with which we are confronted the application of remedies two-fold in character becomes essential: 1st. To forbid the doing in the future of acts like those which we have found to have been done in the past which would be violative of the statute. 2d. The exertion of such measure of relief as will effectually dissolve the combination found to exist in violation of the statute, and thus neutralize the extension and continually operating force which the possession of the power unlawfully obtained has brought and will continue to bring about.

This was a clear recognition of the power to neutralize unlawfully created and continually operating forces destructive of the interests pro-

tected by the Act; and of the necessity of exercising that power to grant the proper measure of relief. This is a general principle applicable alike to integrated combinations like that in the *Standard Oil* case and to loose combinations like that in the present case. In each type of case there is an unlawfully created force which will continue operating unless neutralized; and in each type of case operation of the force will continue to deprive the public of the rights the Act was designed to protect.

The opinion in *Hartford-Empire Co.* v. *United States*, 323 U. S. 386, decided one month after the *Crescent* case, *supra*, does not purport to modify this long established principle. Indeed, its approval of compulsory licensing of the defendants' patents at reasonable royalties must have stemmed from an application of that principle. That this is so is suggested by the dissenting opinion of Mr. Justice Rutledge. He said (323 U. S. at p. 440):

> One may start, *with the Court,* upon the basic idea that, in such a proceeding, the decree's function is not to impose sheer "punishment" for past misconduct, but is rather to devise effective measures to prevent its repetition and dissipate its consequence. [Italics supplied.]

B. THE INADEQUACY OF THE RELIEF GRANTED BY THE DISTRICT COURT

The district court in its opinion (R. 222) and judgment recognized the applicability of this principle. The vice of the judgment lies in the fact

that it falls far short of accomplishing the required neutralization.

The district court found that the defendants have unlawfully acquired control and domination over the industry to the exclusion of all actual or potential competitors (R. 304–305). This control was primarily acquired and maintained by an unlawful combination of patents forming "a veritable jungle of patent claims" (R. 221). Some of these patents were acquired from foreign producers partially by a promise by defendants to restrain their foreign trade in a licensed field broader than the claims of all the patents. And all of the patents came into the combination by a mutual desire of the defendants to strengthen their control over the industry. Included among the patents were those controlling the three originally independent and competing lines of development and the later patents of every significant producer in the world, including the proliferated patents which were the inevitable consequence of the unlawful agreements. As a result of the agreements the validity of none has been adjudicated in any court in any country in the world. Some of the patents the defendants recognized to be of doubtful validity. The defendants have used these patents to acquire control of the entire industry, including trade in unpatented products and products not produced by patented processes (*infra*, p. 98). These patents have also been used to control the competition of the only other domestic producers.

The defendants' control of the industry rests also upon their monopoly of the technology of the industry, a monopoly the district court found detrimental to competitors (R. 305). This information includes the accumulated knowledge and experience of every major producer of products within the licensed fields, fields broader than the trade encompassed by the patents. It relates not only to the practice of the inventions embodied in expired or existing patents but to "secret processes * * * which are not patentable or covered by patents" (RE. 1452). The importance of technology varies with different industries. The record here is replete with evidence of its importance in this industry (RE. 1249–1250, 1290, 1540, 1718–1727, 1878–1885, 1898–1925, 2220, 3651–3731). It is supported by the uniform insistence upon exchange of technology as well as patents in each of the many agreements entered into by the conspirators. One of the reasons why du Pont joined the cartel was to acquire this technology. This extreme importance is to be expected in a new industry concentrated in a few hands since its inception where restrictions on availability of technology have been a keystone of a continuing combination which would forever have kept such technology from the public domain.

Still another means by which control was acquired was the agreements of foreign producers to refrain from exporting to and competing in

the United States. Under the judgment of the district court, the foreign producers are released from these agreements. However, it is demonstrable that there will be either no or negligible competition from them. They are located in war-ravaged countries. The record does not show if their plants are in, or can be restored to, production. Furthermore, there is good reason to believe that they will not desire to export in view of their long established policy of non-competition and lack of contacts in this country (R. 948-949). An important factor is that National Lead now owns a substantial interest in and, under the judgment, may acquire the entire interest in most of the major foreign producers.[18]

The defendants' control of the industry, originally based upon an aggregation of patents, a monopoly of technology, and agreements for a world-wide allocation of exclusive territories, now rests in part upon yet another base. The unlawful control of the industry began with its birth in 1920 and has continued beyond the time of its maturity in 1940 to the present. As a result the industry has never been a part of the free enterprise system the Act was designed to protect. Unlawfully operating without that system, the defendants have been enabled to establish an

[18] NL has already applied to the district court for approval of its purchase of the remaining interest in Canadian Titanium Pigments, Limited.

industry and marketing pattern which will permit them to maintain their domination and control and to continue their restrictions upon the freedom of trade and the right to purchase in a competitive market. The chief characteristic of the industry pattern is the concentration of the industry and its control in the hands of NL and DP, corporations of great size and wealth. They are the two largest producers of titanium pigments in the world. Each has two plants strategically located possessing the major bulk of the domestic productive capacity, and assured sources of supply of ilmenite (R. 248). In these plants they produce the entire domestic production of composite pigments and 90% of the production of pure titanium dioxide. They have extensive research facilities, the entire accumulation of technology, and experience. They have trained personnel, trade connections, and established reputations and good will. The marketing pattern of the industry is characterized by price uniformity, a direct effect of the unlawful agreements (R. 304). Competition has been reduced simply to an attempt by NL and DP to demonstrate the superiority of their products.

The effect of the defendants' control, acquired and maintained by the described means, has been to suppress the growth and development of domestic competition with the result that all purchasers of composite pigments and substantially all pur-

chasers of pure titanium dioxide have been required to purchase from NL or DP and at a uniform price.

The scheme of the judgment fashioned by the district court is this: The present industry and marketing patterns are permitted to continue subject only to such changes as may result from provisions intended to permit the growth of competition. As we will show, the provisions designed to permit the growth of competition, do not, under existing factual circumstances, neutralize the defendants' power to suppress competition. On the contrary, the defendants are permitted rights and privileges, including the right to maintain existing industrial and marketing patterns, the combined effect of which is the continuance of their control with the result that the purchasing public is in the same and competitiors in substantially the same position as before this action was brought.

I

The Misused Patents Should Be Rendered Unenforceable for Their Remaining Lives

A. Reasonable Royalty Licensing of Misused Patents is Inadequate Antitrust Relief

The defendants' control of the industry was acquired and is maintained primarily by their patents,[18a] *supra* (p. 50). The defendants did not object in the court below to the compulsory

[18a] The word "patents" is used to include existing patents and patent applications.

licensing of these patents (R. 1227, 1240). We assume, therefore, that it is conceded that these patents should be available for use by non-defendants. The district court at the request of the defendants included a provision permitting the defendants to charge "a uniform, reasonable royalty" for their use. Subsequent to the entry of the judgment, the trial court stated that it did not believe the defendants should have been permitted to charge royalties and indicated that it permitted them to do so because it felt that under the decision of this Court in *Hartford-Empire Co. v. United States*, 323 U. S. 386, it had no power to do otherwise.[19] We shall discuss this question *infra*, p. 104.

The power created by the possession of these patents will not in fact be neutralized if defendants are permitted any royalty for their use. The right to collect royalties is the power to levy a

[19] In the course of the argument on the motion brought by defendant National Lead to determine reasonable royalties, the following statements were made: (Transcript of hearing on National Lead Motion, October 24, 1946, pp. 55-6).

> MR. WEBSTER: . . . Now, Your Honor has found here first that these two companies dominated and controlled the business of titanium manufactured in the United States, almost in those words. Then you go on to find that they have achieved a monopoly of technical information and that they have achieved that monopoly by virtue, among other things, of proliferation of patents.
>
> THE COURT: No doubt about that. I will believe that forever. . . . I will go further than that. *I would have liked to go along on the question of royalty-free patents, but I felt that I hadn't been given the green light on that.* (Italics supplied.)

toll upon all who would compete with the defendants. This toll not only reduces the defendants' costs of production in the amount they collect but increases the costs of the non-defendants who must pay it. If all other items of cost were identical this would still be a serious competitive disadvantage. But the record indicates that the costs of production are not and will not be identical since to some extent at least costs decrease with increased capacity. In 1939 Zirconium then operating on a production quota of 6000 tons per year (RE. 1728) requested du Pont to increase its quota to 9000 tons per year. It advised du Pont that "unless we can increase our volume of production we are faced with definite losses" and "if we could be permitted to increase our production to 9000 tons it would * * * put us on a profitable basis * * * (RE. 1737–1738).

Increased costs must be reflected in higher prices. Since defendants du Pont and National Lead are the two dominant producers of titanium products in the United States, a decree permitting those defendants to charge royalties for the use of their patents could only have a retarding effect upon establishment of competitive conditions in the titanium industry. Coupled with defendants' economic advantages of tremendous size, full line production of titanium pigments, established customer relationships and skilled personnel, is the further impediment to establishment of com-

petitive conditions inherent in the fact that newcomers to the industry or producers not parties to the conspiracy are faced with the necessity of paying tribute to the defendants in the form of royalties which become a part of the fixed cost of operation for such licensees. Conversely, the defendants in the future will have an added element of profit derived from the royalties exacted from other titanium producers. Thus, "reasonable" royalties, in reality, amount to a double subsidy to the defendants in that defendants derive a profit from the sales of all licensees and such licensees must absorb an additional item of cost not borne by the defendants. This royalty, no matter how "reasonable", unescapably must result in placing the defendants in a more favorable competitive position, *vis a vis*, their licensees.

Under such circumstances it can hardly be expected that risk capital will be attracted to new enterprises in the titanium industry and the court's efforts to instill competition will have failed from the start. This is precisely the result which was criticized by Justice Rutledge in his dissent in *Hartford-Empire v. United States*, *supra*, at 451, wherein he stated, "This Court's revisions of the decree in these respects load upon the industry and the consuming public continuing charges in favor of those who have violated both the anti-trust statutes and the patent laws, a burden which will not end until the last of the

illegally aggregated patents has been expired, if then."

It is to be noted that internecine conflict between the defendants since the entry of the lower court's decree has apparently convinced one of them, defendant National Lead, that reasonable royalty licensing of misused patents in this case cannot be effective or give adequate relief to prevent continued violations of the antitrust laws.[20] After attempting to negotiate reasonable royalties with du Pont respecting each other's patents, National Lead has come to the conclusion that such payments would put du Pont in a position to dominate the industry. If defendant National Lead, the world's largest producer of titanium pigments, finds itself at such

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[20] Defendant National Lead in its motion filed in the lower court on October 9, 1946, has conceded, "The Court having found that National Lead and duPont patents and patent applications listed in the appendix attached to the decree were used in unreasonable restraint of trade, they cannot be enforced against infringers, at least until the effects of the illegal restraints have been fully dissipated." (Citing *Morton Salt*, *B. B. Chemical*, and *Mercoid* cases)

"If a patent cannot be enforced against infringers, it is clearly unreasonable to charge a royalty for a license under it.

"It is National's position, therefore, that it is unreasonable to require any applicant to pay a royalty for a license under any of the National or duPont patents or patent applications listed in the appendix attached to the decree and that this Court should so determine." (Petition of National Lead Co. Requesting the Court to Pass Upon the Reasonableness of the Royalty Demanded by Defendant E. I. du Pont de Nemours & Co. for a License Under the duPont Patents Listed in the Final Decree dated October 11, 1945, pp. 10–11).

a competitive disadvantage as a result of reasonable royalty licenses, how can it be expected that any newcomers or the existing independents could hope to survive, much less provide effective competition?

While compulsory licensing of the abused patents upon a reasonable royalty charge has a plausible sound, the attempt to continue or to create in the defendant a qualified patent privilege, inconsistent with the basic right of exclusion granted by the statute, creates more problems than it solves. These problems preclude and go beyond those which required the courts to refuse enforceability to patents claiming more than the invention discussed *infra*, pp. 78–97. Not only have all of the rights granted by the patent statute been exercised as a whole in the past by the defendants to the detriment of the functions of the patent system, but the exercise of these rights has necessarily become embodied in an affirmatively unlawful course of business in which such exercise is an inextricable part.

The Court has not hesitated to strike down in their totality license agreements containing provisions which might be regarded as valid apart from the illegal context in which they were used; the Courts do not attempt to save for the defendants the valid parts of the license agreements, but enjoin enforcement of the entire agreement. (*Interstate Circuit, Inc.* v. *United States*,

306 U. S. 208; *Ethyl Gasoline Corporation* v. *United States,* 309 U. S. 436.) The basis for such holdings is that the Court recognizes the practical impossibility of segregating the legal from the illegal elements of such agreements and at the same time of protecting the public interest in effective termination of the illegal scheme of which they were an integral part. Implicit in these holdings is the further recognition that in the absence of a history of lawful use by the defendants of such agreements the Court is in no position to predict the competitive consequences of such future use. Since the defendants themselves have deliberately deprived the Court of any basis for such an estimate, they are, of course, in no position to insist that one be made for their benefit.

Similarly, any attempt to keep alive for the benefit of the defendants some of the statutory patent privileges which are found to have been illegally used by them in the past also requires an artificial separation of interdependent privileges habitually used as a whole. We submit this is legally and practically impossible of achievement. Thus, in a decree requiring compulsory reasonable royalty licensing the statutory right to sue for infringement of the patent is qualified by partially removing monopoly rights in the hands of the patentee. The patentee no longer retains the essential attribute of the patent privilege,

that of excluding all others except upon his consent but is limited to retention of royalties nebulously defined as "reasonable." This form of relief would appear logically to be predicated on a finding that the only abuse of the patent has been exclusion of competitors by a scheme violative of the Sherman Act. It would appear to presuppose that the right to waive infringement suits upon payment of royalties to the patentee has not been abused.

Yet this analysis is not supported by the facts in the instant case. In the instant case not only have duPont and National Lead concertedly exercised their rights under patents to dominate the titanium industry and to exclude competition (R. 272, 291, 303–6), but also the defendants have granted licenses to two small American titanium producers, American Zirconium and Virginia Chemical, upon condition that the defendants be paid royalties based upon all titanium production of such licensees irrespective of whether the titanium was produced under the licensed patents or under processes not covered by the licensee. Thus not only have abuses occurred with respect to the statutory right to exclude but also with respect to the waiver of this right upon payment of royalties.

Traditional concepts of antitrust relief should, therefore, equally condemn continued exercise of

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either right by the defendants. Application of the traditional antitrust policy in the formulation of an equity decree would prohibit assertion of any rights under the patent statutes by the defendants with respect to the abused patents.

It is also apparent that permitting the defendants to charge royalties for the licensing of the patents subject to this decree leaves in the defendants' hands the fruits of their illegal conduct. This also is pointed out by Justice Rutledge in his dissent in the *Hartford-Empire* v. *United States, supra,* at p. 443, in which he stated:

> Every dollar hereafter, as well as heretofore, secured from licenses on the patents illegally aggregated in the combination's hands is money to which the participants are not entitled by virtue of the patent laws or others. It is the immediate product of the conspiracy. To permit these patents to remain in the guilty hands, as sources of continuing lucrative revenue, not only does not deprive their owners of the fruit of their misconduct. Rather it secures to them its continued benefits. The pool may no longer utilize illegal methods. It, and the constituent members, will continue to enjoy the preferred competitive position which their conduct has given them and to use both that position and the ill-gotten patents, together with the patent position, to derive trade advantage over rivals and gain from the public which the patent laws of themselves never con-

templated and the antitrust laws, in my opinion, forbid.

Furthermore, permitting the defendants to charge royalties for the licensing of such patents leaves them with the advantages gained by abuse of the patent privilege. They hold all rights under processes initiated as alternative and potentially competitive means of producing titanium and its pigments and compounds.

No newcomer could undertake to contest the patent position which has been attained by the defendants. The burden of retracing the steps by which the technology of the industry has been built up, to separate what was or is novel in such patent position, and to present such information to the patent office and the courts, if not impossible, is a substantial foreclosure of the field. The illegal actions of the defendants have in the past precluded the step by step testing of such patent position, which is contemplated by the patent laws. Only by rendering the abused patents unenforceable can the objectives of the antitrust laws and the patent laws again become operative in this industry.

B. UNWORKABILITY OF REASONABLE ROYALTY LICENSING AS ANTITRUST RELIEF

The practical difficulty of providing for reasonable royalties in a background of patent abuse and antitrust violation renders such relief unworkable. These practical considerations, implicit in the

rationale of the rule terminating the enforceability of abused patents, are:

1. That the evaluation of patents as a part of antitrust relief against a background of abuse of patents, imposes upon the courts "an onerous and absorbing administrative burden." *United States v. Crescent Amusement Co.*, 323 U. S. 173, 186.

2. That the fixing of a patent value in terms of a royalty which will at the same time instill competition into the industry and dissipate the effects of monopoly, requires judicial regulation of the future economics of the industry, and is hence incompatible with our system of free enterprise.

The determination by the Court in the *Hartford-Empire* case to permit continued enforceability of the abused patents and the collection of "reasonable" royalty was made without a demonstration to this Court by the parties of the seriousness of such difficulties.[21] However, consideration

[21] The difficulty of determining reasonable royalties, however, has previously been given recognition as one of the objections to practically every Congressional bill for compulsory licensing of patents. Testimony before Committee on Patents, House of Representatives on H. R. 23417 (Oldfield Bill), 62nd Cong., 2nd Sess. (1912), Part XII, p. 11, Part XXVI, p. 26, 29-30; Minority Report on H. R. 23417, 62nd Cong., 3rd Sess. (H. Rep. No. 1161, Part 2); Hearings before Senate Committee on Patents on Stanley Bill, S. 3410, 67th Cong., 2nd Sess. (1922); Hearings before the TNEC, Part 3, Patents, p. 999; Hearings on H. R. 9259, H. R. 9815, and H. R. 1666 before the Committee on Patents, Subcommittee on Compulsory Licensing, House of Representatives,

of these difficulties as illustrated by subsequent experiences in the Hartford case itself, indicates that they constitute an independent ground against permitting any continued vitality in the abused grants.

Valuation of a patent in a proceeding before a master in supplement to other antitrust relief, gives rise to all the problems which accompany any patent accounting. Klooster, *Patent Accountings* (1930); Bennett, *The American Patent System* (1943). The same resort must be made to expert testimony and to evidence regarding the character of the invention, cost of manufacture and marketing, prices, present and future demand, efficiency of producers, etc. *Austin-Western Road Machinery Company* v. *Disc Grader*

75th Cong., 3rd Sess. (March 1938, p. 30); Report of Special Committee of American Patent Law Association, March 15, 1938, with respect to H. R. 9259, 75th Cong., 3rd Sess.

The report of the Subcommittee of the American Bar Association appointed to Consider the King Bill, S. 383, 74th Cong. (1935) makes a typical comment:

"* * * Common experience in patent accountings indicates not only the difficulty of establishing a fair and reasonable royalty in a large proportion of cases, but the unlikelihood that the terms established in the granting of compulsory licenses would prove to be fair in any large percentage of cases. In most cases the initial terms would be fixed before use or sufficient use, so that necessarily the value of the invention and a fair return would be purely speculative. Again, in many instances the patent under which the license would be sought would be only one of a number of patents covering the thing in question. To evaluate that patent fairly would usually be hopeless."

and Plow Company, 291 Fed. 301 (C. C. A. 8); Klooster, *op. cit.*, p. 49 ff. There is the same difficulty of apportioning to the invention only its particular share of the total value of the product, process or apparatus of which it is a part. Klooster, *op. cit.*, Chapter LX. Furthermore, in selecting a comparable unpatented machine device or process for measuring the economic advantage or savings involved in using the patented invention, the problem is raised as to whether such machinery or device infringes the patent in question.[22] Another problem is that of determining the value of unexploited patents and applications or patents and applications for future use. Such prophecy of future value can only be decided on the basis of the most conjectural kind of expert testimony.

The solution of all these problems will necessarily be time consuming and expensive, even more so than the conventional patent accounting proceedings which are notoriously lengthy.[23]

[22] In the *Hartford-Empire* proceedings only one competing manufacturer exists. Its machine, the Liberty feeder was placed on the market in 1942. Counsel for Hartford have indicated that they consider this machine infringes a "substantial" number of the Hartford patents. The court may thus have to decide an infringement suit as a prerequisite to determining reasonable royalties.

[23] "Five years * * * is not too long to estimate for the accounting proceedings," Klooster, *op. cit.* p. 92. The proceedings before the master in the *Hartford-Empire* case will last at least several months. It should also be pointed out that so many matters of dispute have already arisen regard-

Furthermore, since a new invention may develop into unforeseen importance during its patent life or may be rendered substantially obsolete by future inventions, readjustment of royalties may be required from time to time by the court. Vaughan, *Economics of Our Patent System* (1925) p. 243. In fact, there would be no finality to the finding of a reasonable royalty in any sense since it could not be res adjudicata as to any particular applicant. *Goodyear Tire & Rubber Co.* v. *Overman Cushion Tire Co.*, 95 F. 2d 978, 984 (C. C. A. 6).

This burden which is imposed upon the courts in the case of a single or a few patents becomes overwhelming in patent pooling situations, such as in the instant case, where there is a piling of patent upon patent, an aggregation of patents extending across the whole breadth and depth of the industry and its technology. In the instant case the court will have to place a value upon each of 351 patents and applications owned or exclusively licensed to duPont and National Lead. About 200 of these patents and applications contain one or more claims on apparatus' or processes used in the manufacture of titanium pigments. Most of them are improvements on the processes and apparatus' originally disclosed

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ing procedure, burden and scope of proof, whether or not the validity of the patents is to be determined, etc., that the *Hartford* case will probably not be concluded until after a further hearing in this court.

in the basic patents now expired. The remaining 150 patents relate to the physical products themselves, which may be roughly classified as Titanium Oxide Pigments, Rutile Pigments, Composite Pigments, Extenders, Titanium Dioxide Plus Inorganic Materials, Zinc Oxide and White Lead plus TiO_2 Pigments, Pigments of TiO_2 plus Organic Materials, Titanates, Seed or Nuclear Materials, Intermediate Products, End Products Using Pigments and Miscellaneous. Of the 351 patents and applications only 66 are commercially used by National Lead and approximately 70 are used by duPont. The value of the commercially used patents and applications will presumably have to be determined by comparison with the unused patents in the aggregation.[24] The difficulty of evaluating these patents is further increased by the fact that the court will have no prior body of evidence or finding of fact to look to for assistance, since one of the effects of the conspiracy has been to prevent entirely patent litigation in the titanium pigment field throughout the world (R. 272).

Obviously, no court can decide arbitrarily that all the patents should be lumped together and a reasonable royalty fixed at an arbitrary figure of, e. g., 2% of the sales price of goods produced under the patents (du Pont's proposal to

[24] e. g., The Leuchs patent, purchased jointly by National Lead and duPont in 1934 which was thought might anticipate a Blumenfeld patent (R. 293).

National Lead). It would be contrary to the patent laws and to the public interest to reward the defendant patentee for more than the actual value of the economic advantages or savings attributable to the inventions covered by his unexpired patent or patents. *Scott Paper Co.* v. *Marcolus*, 326 U. S. 249, 256–7. It is only the "precise essence" of the "advance in the art" for which the patentee may be rewarded. *Mercoid Corporation* v. *Minneapolis-Honeywell Company*, 320 U. S. 680, 683.

This rule must be given strictest application where the defendant patentees have for years illegally dominated the industry and monopolized the art and the artisans. Under the circumstances of the present case, any offhand determination of reasonable royalty could easily reward the defendant patentee for (and burden competitors and the public with the cost of) economic advantages resulting from its high level of know-how rather than from advantages stemming directly and solely from the inventive features of the processes, machinery or products covered by his patents. Furthermore a licensee must be given the right to take a license under only the patent or patents which he may desire, e. g., the competitor who is satisfied to produce something less than the most improved process; or less than a full line of the patented products; or, for a more striking example, the competitor whose own

research has enabled him to develop and patent an entirely independent process or machine which in commercial application infringes upon a minor improvement patent of defendant patentee. In the instant case both independents, American Zirconium and Virginia Chemical, had patents of their own and took licenses under only a part of du Pont's patents. (R. 295, 297.)

This "onerous and absorbing" burden, is not peculiar to the determination of reasonable royalties in the Hartford-Empire and National Lead cases but will be imposed on the courts in every anti-trust case involving patents. In fact, in some antitrust suits where large areas of American-industry are controlled patentwise the task would seem impossible.[25]

It is not merely the difficult, burdensome and time-consuming prospect of evaluating thousands of patents in many lawsuits involving countless products, imposed upon the courts which makes the reasonable royalty formula a harmful one. It saddles the courts, the public, the injured parties, and prospective competitors with what may be

[25] For example the Government has presently 5 cases against General Electric Co. involving hundreds of patents covering incandescent and fluorescent lamps and electrical equipment and apparatus of all kinds. In the civil suit pending in the Southern District of New York, *United States* v. *Imperial Chemical Industries, Ltd.*, charging a conspiracy to restrain trade involving a patents and processes exchange agreement, there are estimated to be over 2,000 patents involved covering 4,500 products in the chemical and allied fields.

years of litigation as a method of providing relief against antitrust violations. The days or weeks spent litigating the question whether the antitrust laws have been violated are thus terminated by a final judgment ordering months or even years of further litigation to fix reasonable royalties. The person most likely to gain from such continued litigation is the antitrust violator who has the patents, the monopoly profits, and the monopoly position. The competitor who settles[26] rather than face the expense of such litigation does so on the royalty terms of the antitrust violator, and thus enters or continues in the industry by paying tribute and doing business at the sufferance of the one against whose misuse of patents the judgment was designed to protect him.

A second practical problem of the reasonable royalty formula is that it puts the courts squarely in the position of regulating competition in the industry and of fixing the financial terms upon which new competition can enter the industry. The evaluation of the patent is not the court's only task. In arriving at a reasonable royalty, the

[26] It should be pointed out that determination of royalties by settlement negotiation between the defendants in a patent pooling case is no solution. It would merely be a continuation of conspiratorial activity. Judge Rifkind stated in the hearing on National Lead's Motion to Modify the Decree, that even if duPont and National Lead had agreed on a royalty, the court would still consider it necessary to go through with evaluation proceedings. (Transcript of Hearings, p. 60.)

value of the patent must be qualified and tempered by consideration for the competitor's ability to pay and by consideration for the ultimate purpose of relief, i. e., dissipation of the effects of the patent abuse and the instillation of competition in the industry. Obviously, if the value of the patent is so high as to prevent free and vigorous competition between defendant and competitor then monopoly and restraint by means of valuable patents would render the courts impotent to provide adequate relief. In the Memorandum Opinion of the district court in the *Hartford-Empire* case filed April 3, 1946,[27] the court ordered that a reasonable royalty should be determined "at a figure which will permit continuous competition between the lessor in leasing such machines and an efficient distributor in selling them, or, if the licensor does not also lease machines, then at a figure which will permit the sale of such machines at a reasonable profit by an efficient distributor thereof in a competitive market." The remarks of the district judge with regard to this problem are noteworthy:

> Until the Supreme Court says, in unmistakable terms, that it does not desire to instill competition into the manufacture, sale and distribution of glass making machinery, this Court must assume that the Higher Court does desire competition in

[27] *United States* v. *Hartford-Empire Co.*, 65 F. Supp. 271 (D. C. N. D. Ohio).

the industry and does desire that the illegal combination, resulting in an unreasonable restraint of trade in the glass container industry through the control of machinery used in the manufacture of glass, be dissolved. Perhaps the Higher Court did not fully appreciate the extent of the problem that it was referring to this Court to solve when it ordered that Hartford should be required to license the patents involved for manufacture, use or sale on reasonable terms. What are reasonable terms in a given industry for a license to manufacture and sell certain inventions cannot be arrived at through mathematical formula, nor should they be arrived at through arbitrary judgment or mere guess work. The parties involved herein have attempted to arrive at a definition of "reasonable terms" and they have failed. The Court has no criteria to govern him in arriving at a definition of "reasonable terms" in this particular industry and for this kind and class of machinery. By the terms of the Supreme Court opinion, the Hartford Company is required to license glassware manufacturers to use and machinery manufacturers to make and sell its patented inventions. The royalties charged manufacturers to use can be taken into consideration in arriving at the license fee to be paid by machinery manufacturers to make and sell, but they ought not to govern the establishment of reasonable terms for a license to make and sell. There is nothing

to prevent the Hartford Company from continuing its established policy of leasing its machinery on a use royalty basis if it so desires, but certainly there is an injunction coming from the Supreme Court to the Hartford Company to license its patents on reasonable terms to all applicants who may desire to manufacture and sell this same machinery. This means, of course, the establishment of competition between the two methods of distributing machinery. The Court is then confronted with the problem of instilling competition into the business of manufacturing, selling and distributing glass making machinery, and at the same time allowing the patentee reasonable compensation for the licensing thereof.

Thus the courts must try to discern in the shifting forces in an industry the fine point at which a royalty rate may be made to coincide with the requirements of competition. It must attempt the difficult task of determining what economic advantage can be given to the defendant by means of royalties without at the same time giving that defendant a competitive advantage which will prevent others from entering or remaining in the industry.

To make that determination, if such a determination is possible, the court must decide how much competition it wants, how efficient a manufacturer must be (in order to sustain the

royalty), what is a fair profit return (over and above the royalty), and if the royalty fixed does not produce the required competition the court must adjust it downward until it does.

Such judicial regulation has been condemned by this court in the price-fixing cases, *United States v. Trenton Potteries*, 273 U. S. 392; *United States v. Socony-Vacuum Oil Co.*, 310 U. S. 150, where it refused to undertake the task of determining reasonable prices. It should likewise be condemned as a part of antitrust relief in cases involving patents because the determination of a reasonable royalty regulates competition just as surely as determining reasonable prices. In fact this Court has already had occasion to observe that the power to fix royalties "is tantamount to the power to fix prices", *Standard Oil Co. v. United States*, 283 U. S. 163, 174. And in the final analysis the determination of reasonable royalties requires a preliminary determination of the reasonableness of the defendants' prices.

In the instant case product patents as well as apparatus and process patents are involved. To determine what is a reasonable burden to impose upon competition, the court must not only determine savings in manufacturing cost arising out of the use of the patented processes and apparatus, but also profits obtainable from the sale of the patented products. Obviously the court can determine the profits attributable to the pat-

ented products only after the most exhaustive study of the past costs and prices and the prospective future sales of duPont, National Lead and the licensees, and even then only after the adoption of one or more accounting and economic theories.

Furthermore in examining profits obtainable from the use of the patents the courts must first consider whether such profits were obtained under monopoly prices.[28] If a royalty is fixed on past profits obtained under monopoly prices, that royalty may be so high as to burden the public thereafter with high monopoly prices. Moreover, the price level will determine the extent to which competitors can compete under the royalty charges. If an existing price level under which the defendant makes high profits is taken as a basis for determining what royalty a reasonably efficient [29] manufacturer can pay and still make a reasonable profit, the defendant can always control competition by the threat of cutting

[28] In the instant case, the court found one of the necessary effects of the conspiracy to be that "prices of titanium pigments and compounds in the United States have been maintained at uniform levels and all competition with foreign producers in the manufacture and sale of titanium pigments and compounds in the United States has been eliminated." (R. 304.)

[29] The problem of determining "efficiency" in an industry which, for twenty years, has been under monopoly control should not be underestimated. The monopolist's own practices are a poor test since there is no incentive for a monopolist to be efficient.

prices to the point where the licensee breaks even (assuming equal costs between them), whereas the defendant under those conditions still has a profit amounting to the royalty on his own sales plus the royalties paid by the competitor. Thus, it would seem that if real competition is to be instilled into the industry, and the public protected against monopoly prices, the courts must fix a royalty based upon a price level estimated to return to defendants only a reasonable profit.

It is submitted, therefore, that the fixation of a reasonable royalty is no different [redacted] from a determination of the court as to whether or not an agreed price is reasonable. The same problems of choice of economic philosophies, and accounting principles exist. There is the same inconstancy of any finding as a result of changing economic conditions. There is the same inadequacy of judicial procedures for making such findings. And more serious, there is the same end result—the dynamics of our economic system determined by judicial regulation rather than by the play of competitive forces in a free market.

In the long line of cases culminating in *Morton Salt* and *Mercoid*, *infra*, pp. 89–97, the rule was adopted that improperly used patents are unenforceable. This rule reflects the impossibility of reconciling a continued vitality in the abused grant with the purpose of the patent grant in a system of free competitive enterprise.

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To attempt to permit a continued vitality in the abused grant by permitting the collection of reasonable royalties and the imposition of other conditions (such as continuing to secure the technology of others by requiring reciprocal licensing of licensees' patents) would not only be to assume that such a reconciliation can be made, but would impose an impractical burden on the courts.

C. THE POLICY OF THE PATENT LAW AS WELL AS OF THE ANTITRUST LAW REQUIRES THAT DEFENDANTS' PATENTS BE RENDERED UNENFORCEABLE FOR THEIR REMAINING TERMS

We have demonstrated that in order to dissipate the effect of the defendants' unlawful conduct and restore a truly competitive structure to the industry, it is necessary that defendants no longer be permitted to collect royalties on their patents here involved. The same conclusion—the unenforceability of the patents so misused—follows if the problem be approached by way of the patent laws. For the anti-monopoly policy of the Sherman Act and the statutory and judicially recognized restrictions on the use of patents are both designed to maintain a competitive economic system, limited only by the exclusive rights of those who use their patents lawfully. Although this is a suit under the Sherman Act, the identity of result under the patent law is important, inasmuch as defendants rely on their

"patent rights" to defeat the Government's contention that the patents be made completely unenforceable for their remaining lives. Furthermore, the theory of the decisions dealing with extensions of the patent privilege beyond the grant authorized by the patent statutes and the holdings in the *Mercoid* cases in particular, see pp. 89–94, *infra*, demonstrate that the same relief should be granted in antitrust suits.

We will show that domination of the titanium industry by the defendants has been achieved and maintained primarily by consistent misuse of an aggregation of patents. Infra, pp. 98–103. Such misuse, in essence, consisted of the deliberate extension of the several patent monopolies beyond the terms and scopes of the authorized grants. That the patents so misused should be rendered unenforceable for the remaining periods of the grants, is, we submit, compelled by established principles applicable alike under the patent laws and under the antitrust laws.

The patent is a grant of special privilege conferred upon inventors by the United States. Its constitutional purpose is to promote the progress of science and useful arts. The scope and terms of the grant are such as Congress decrees for it. Limitations and disabilities inherent in the grant arise from its constitutional purpose and the functions of the patent system in an economy of free competitive enterprise.

The Constitution provides for a patent system "to promote the Progress of Science and useful Arts, by securing for limited Times to * * * Inventors the exclusive Right to their * * * discoveries". Art. I, Section 8, Clause 8. The patent statutes grant to the patentee a right to exclude others from making, using, or vending his invention. 35 U. S. C. § 31. Basic under both the constitutional sanction and the statutory grant are the limitations: (1) only a right to exclude is conferred and (2) such right of exclusion is restricted to the invention or discovery.

These limitations are essential to the functioning of the patent system. The system operates by granting to the inventor a period during which he may exercise a right to exclude from his invention in exchange for disclosure of such invention. The purpose of disclosure is two-fold: (1) to insure the ultimate dedication to the public of the invention and the means of its practice and application and (2) to inform others of the limits of the grant, of the line between what is open for invention and development and what has for a limited time been preempted by the patentee. *Universal Oil Products Co.* v. *Globe Oil & Refining Co.*, 322 U. S. 471, 484. Such disclosure takes the form of the specifications and claims in the patent. The claims must be responsive to the prime condition upon which a patent is issued to

the patentee, he must "particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery". Revised Statutes, Sec. 4888, 35 U. S. C. § 33. Sharp definition of the invention is essential to prevent the issuance of colorable grants. Such grants would establish monopolies for subjects beyond the inv ation, would prevent competition in the development of technology and would result in privilege to monopolize derogating from the public domain where no grant should be issued. Only by adhering to the limitation that the privilege is limited to the invention or discovery can the patent system be kept within its proper function.

The underlying rationale for limiting the patent privilege to the invention has always been a part of our patent system. Whenever the patentee attempts to secure or assert a monopoly beyond his invention, "he prevents others from attempting to improve upon the manner and process which he has described in his specification—and may deter the public from using it, even if discovered. He can lawfully claim only what he has invented and described, and if he claims more his patent is void". *O'Reilly* v. *Morse*, 15 How. 62, 120–121.

Without limiting the privilege to the invention both in the grant and in the use, the constitutional

purpose of the patent grant is defeated and the patent system would conflict with the basic public policy against restraints of trade and monopoly which predates and is incorporated in the Sherman Act. Without such limitation the incentive to invent sought to be encouraged by the patent system would be perverted to an incentive to secure sanctions for illegal restraints of trade. *Mercoid Corp. v. Mid-Continent Co.*, 320 U. S. 661, 666.

The public policy enunciated in the constitution, the patent statutes and the decisions of this Court, limiting the patent privilege to the invention or discovery, is the dominant norm for adjudication of the scope and disabilities of the patent privilege. The limitation assures alike that the privilege will not be used to create monopolies beyond the invention in contravention of the antitrust laws and will not be used to bar the development of further and competitive technologies or the utilization of available technology as contemplated by the patent system.

It is a necessary and inevitable consequence of the public policy which limits the patent privilege to the invention that the patent is rendered unenforceable for its remaining life where it is used to extend the privilege beyond the invention for which the grant is authorized. Such extension creates situations which cannot be rectified under

the antitrust and the patent laws merely by prohibiting the abuse and permitting the privilege to continue. The past and future effects of loss of opportunity for others to invent, the uncertainty as to general commercial rights, the deterring of others from legitimate action together with the inseparability of past abuse from future operation of the patent system in this field necessitates complete unenforceability of the patent privilege where it has been claimed for more than, or extended beyond, the authorized grant. Several lines of authority converge to sustain this proposition.

Regardless of the manner in which private litigants have posed the issue of the relative importance of the public interest in the patent system as contrasted to the convenience or commercial interests of the patentee, the Court has consistently refused to apply ordinary principles of estoppel or other common rules of contract law where the application might lead to a result injurious to the dominant public interest in maintaining the integrity of the patent system. Thus the Court has refused to foreclose a private litigant from contesting the validity of a patent even though he had previously attempted to secure a similar patent, *Haughey* v. *Lee,* 151 U. S. 282; *Paramount Publix Corporation* v. *American Tri-Ergon Corporation,* 294 U. S. 464; even though

he had not exercised a high degree of diligence in making the claim of invalidity, *Hazel-Atlas Co.* v. *Hartford-Empire Co.*, 322 U. S. 238; or had taken a restrictive license from the patentee, *Sola Electric Co.* v. *Jefferson Electric Co.*, 317 U. S. 173; *Edward Katzinger Co.* v. *Chicago Metallic Mfg. Co.*, Nos. 70, 71, this Term, decided January 6, 1947. And in *Scott Paper Co.* v. *Marcalus Manufacturing Co.*, 326 U. S. 249, the primacy of the public interest in the patent system was reaffirmed under circumstances which make it perfectly clear that conventional doctrines applicable to the disposition of property rights created by private contract have a very limited application to the disposition of patent rights. In that case the Court refused to apply the doctrine of private equitable estoppel to prevent an inventor who had assigned his patent from claiming as against his assignee that he had in fact invented nothing in securing the patent in question, but had merely copied an expired patent. The public interest in securing the rights of all the public, including in this instance the specious inventor, to the practice of expired patents was held to override the principles of equitable estoppel which govern transactions in private property. Similarly the Court has refused to enforce a contract which required the licensee not to contest the validity of certain patents under which he was not licensed. *Pope Manufacturing Co.* v. *Gormully*, 144 U. S. 224. Furthermore, since the

question of validity of a patent is of much greater public importance than the question of infringement by a particular litigant, the Court has criticized a tendency of the lower federal courts to dispose of infringement suits upon the ground of non-infringement without passing upon the question of the validity of the patent. *Sinclair Co.* v. *Interchemical Corporation*, 325 U. S. 327.

In thus protecting the public interest dominant in the patent system this Court has repeatedly refused to enforce a patent used to monopolize or claim more than the invention, with no suggestion that such a result confiscated any property rights. Thus where an applicant for a patent has failed to "particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery," 35 U. S. C. § 33, the Court has refused enforcement, recognizing that "to sustain claims so indefinite as not to give the notice required by the statute would be in direct contravention of the public interest which Congress therein recognized and sought to protect." *United Carbon Co.* v. *Binney Co.*, 317 U. S. 228, 233. Or as was said in *Universal Oil Products Co.* v. *Globe Oil Co.*, 322 U. S. 471, 484, "the claim is required to be specific for the very purpose of protecting the public against extension of the scope of the patent."[30] So too,

[30] See also *General Electric Co.* v. *Wabash Co.*, 304 U. S. 364; *Evans* v. *Eaton*, 7 Wheat. 356; *Brooks* v. *Fiske*, 15 How. 212.

the patent privilege is lost if the claims made in application or grant go beyond the invention (*Marconi Wireless Telegraph Co.* v. *United States*, 320 U. S. 1), for otherwise "the patent monopoly would thus be extended beyond the discovery and would discourage rather than promote invention." *Holland Furniture Co.* v. *Perkins Glue Co.*, 277 U. S. 245, 257.[31] If the invention and the method of its practice are not fully stated, the patent is invalidated *in toto*. *General Electric Co.* v. *Wabash Co.*, 304 U. S. 364. Similarly, any claim designed to deceive or mislead the public invalidates the entire patent. *Turner* v. *Winter*, 1 T. R. 602, 605 (1787); *Carlton* v. *Bokee*, 17 Wall. 463, 472. The Court will refuse to accord the patent privilege to an invention which includes the old with the new, as it was not the intention of the patent law "to take from the public, that of which they were fairly in possession. * * * it would be extremely impolitic, to retard or embarrass this advance, by withdrawing from the public any useful invention or art, and making it a subject of private monopoly." *Shaw* v. *Cooper*, 7 Pet. 292, 320. Nor may a patentee lengthen the period of his monopoly by withholding knowledge of his invention, yet work it commercially, and then at a later date apply for

[31] See also *O'Reilly* v. *Morse*, 15 How. 62.

a patent to forestall the danger of competition. *Pennock* v. *Dialogue*, 2 Pet. 1; *Woodbridge* v. *United States*, 263 U. S. 50.[32]

The only escape which the law allows to the person who claims more than his invention is a timely correction before the Patent Office and a showing that the excess or exaggeration in the claims were due to mistake, accident or inadvertence: Rev. Stat. §§ 4917, 4922; 35 U. S. C. 65, 71. Under the general rule a patent with an invalid claim is wholly void, the purpose being the "protection of the public from the threat of an invalid patent." *Marconi Wireless Telegraph Co.* v. *United States*, 320 U. S. at p. 58. To invoke the protection of the disclaimer statute, the patentee must conduct himself strictly in accordance with its terms. "Escape is permitted only to one who acted originally in good faith and who has complied with the prescribed conditions." *Ensten* v. *Simon, Ascher & Co.*, 282 U. S. 445, 452. The Court has strictly enforced the requirements of the disclaimer statute and where it has found a failure to comply with its specifications the patentee has lost his entire grant, including his rights under the otherwise valid claims of his patents. The Court has not permitted reformation of the claims so as to describe solely that which was true

[32] See also *Metallizing Engineering Co.* v. *Kenyon Bearing Co.*, 153 F. 2d 516 (C. C. A. 2).

invention nor has it concerned itself with the question whether such loss of an exclusive right in the invention constitutes a confiscation of property rights. The Court in *Altoona Theatres* v. *Tri-Ergon Corp.*, 294 U. S. 477, 493, indicating that it gives no weight to a consideration of confiscation of property rights in cases involving abused patents, has stated "the settled rule that unreasonable delay in making a disclaimer invalidates the whole patent * * * rests upon the similar principle that misuse of the patent, or a part of it, by the patentee in such a manner as to mislead the public or operate to its detriment, deprives the claim of the benefit of the patent laws."

Nor has the Court been concerned where a patentee has lost his patent privilege by failure to comply strictly with the terms of the reissue statute. Rev. Stat. § 4916; 35 U. S. C. § 64. By its terms a patentee may surrender a defective patent and obtain a reissue only upon a showing of inadvertence, accident or mistake and such reissue must be sought without delay. The Court has been quick to point out the damage to the public interest which would result from a loose application of this statute holding that the grant of a reissue "after an unreasonable delay, is clearly an abuse of the power to grant reissues and may justly be declared illegal and void. It will not do for the patentee to wait until other

inventors have produced new forms of improvement, and then, with the new light thus acquired, under pretence of inadvertence and mistake, apply for such an enlargement of his claim as to make it embrace these new forms. Such a process of expansion carried on indefinitely, without regard to lapse of time, would operate most unjustly against the public, and is totally unauthorized by the law. In such a case, even he who has rights, and sleeps upon them, justly loses them" *Miller* v. *Brass Co.*, 104 U. S. 350, 355.

And in a now famous line of cases beginning with *Motion Picture Co.* v. *Universal Film Co.*, 243 U. S. 502, and culminating with *Mercoid Corporation* v. *Mid-Continent Co.*, 320 U. S. 661,[33] the Court has condemned any attempt after issuance of the patent to monopolize the unpatented by use of the patent privilege. These decisions have not been predicated upon any failure to comply with the statutory requirements of the patent laws. The Court in these cases has denied enforceability to the patent privilege where the basic limitation of the grant to the invention has been disregarded by the patentee or those claiming under him. The Court has recognized that the evils of extending the patent grant beyond the

[33] See also *Carbice Corp.* v. *American Patents Corp.*, 283 U. S. 27; *Leitch Mfg. Co.* v. *Barber Co.*, 302 U. S. 458; *Morton Salt Co.* v. *G. S. Suppiger Co.*, 314 U. S. 488; *B. B. Chemical Co.* v. *Ellis*, 314 U. S. 495.

authorized right to exclude from an invention, are the same and require the application of the rule of unenforceability wherever and however the abuse of the privilege occurs. No matter how the question arises the evil is "expanding the patent beyond the legitimate scope of its monopoly" (*Mercoid Corp.* v. *Mid-Continent Co.*, *supra*, 665), with the attendant interference in the functions of the patent system and injury to the public. The Court has recognized the fundamental similarity in the injury to the public arising from patents claiming more than the invention and the use of patents to monopolize or control competition in the unpatented by stating that "the public policy which includes inventions within the granted monopoly excludes from it all that is not embraced in the invention. It equally forbids the use of the patent to secure an exclusive right or limited monopoly not granted by the Patent Office and which it is contrary to public policy to grant." *Morton Salt Co.* v. *G. S. Suppiger Co.*, 314 U. S. 488, 492.

In the *Mercoid* case (320 U. S. at 665) the Court pointed out that the basic rationale of the Court's decisions which "alike nullifies a patent where any part of it is invalid * * * and denies to the patentee after issuance the power to use it in such a way as to acquire a monopoly which is not plainly within the terms of

the grant" is "the protection of the public in a system of free enterprise". We submit that this rationale is basic to the cases which have been herein reviewed; that it is fundamental and applicable whether the issue has been that of indefinite claims, claims encompassing more than the invention, failure to comply strictly with the disclaimer statute or the reissue statute, or misuse of patents after issuance. The Court has recognized that the threat to a system of free enterprise and the distortion of the patent system which results from such abuses requires unenforceability of the privilege where it has been extended or exercised beyond the authorized grant.

The purpose of the antitrust laws also, of course, is the protection of a system of competitive free enterprise.

In *Mercoid Corp.* v. *Mid-Continent Co.*, 320 U. S. 661, and *Mercoid Corp.* v. *Minneapolis-Honeywell Co.*, 320 U. S. 680, the Court was called upon to determine the consequences flowing from the misuse of a patent in violation of the antitrust laws. There the Court recognized that the rationale of the rule rendering improperly used patents unenforceable was applicable alike under the patent laws and the antitrust laws. In the first case, *Mercoid Corp.* v. *Mid-Continent Co.*, Mercoid, in answer to a suit for contributory infringement, alleging misuse of

the Cross patent in violation of the antitrust laws; and in the second case, *Mercoid Corp.* v. *Minneapolis-Honeywell*, Mercoid, charging a use of the Freeman patent in violation of the antitrust laws, sought affirmative relief against respondents in the form of injunctions against infringement suits and treble damages. In the first decision, holding that attempts to control competition in an unpatented device forming an integral part of the combination patent constituted a misuse of the patent, the Court again restated the threat to the integrity of the patent system and to the maintenance of the antitrust laws presented by such misuse, as follows (pp. 667, 668):

> But the fact remains that the competition which is sought to be controlled is not competition in the sale of the patented assembly but merely competition in the sale of the unpatented thermostatic controls. The patent is employed to protect the market for a device on which no patent has been granted. But for the patent such restraint on trade would plainly run afoul of the anti-trust laws. If the restraint is lawful because of the patent, the patent will have been expanded by contract. That on which no patent could be obtained would be as effectively protected as if a patent had been issued. Private business would function as its own patent office and impose its own law upon its licensees. It would obtain by contract what letters patent alone may grant. Such a vast power 'to multiply monopo-

> lies" at the will of the patentee * * * would carve out exceptions to the anti-trust laws which Congress has not sanctioned. * * *
>
> * * * If a limited monopoly over the combustion stoker switch were allowed, it would not be a monopoly accorded inventive genius by the patent laws but a monopoly born of a commercial desire to avoid the rigors of competition fostered by the anti-trust laws. If such an expansion of the patent monopoly could be effected by contract, the integrity of the patent system would be seriously compromised.

In *Mercoid Corp.* v. *Minneapolis-Honeywell, supra,* the Court expressly recognized that the misuse of the Freeman patent constituted a violation of the antitrust laws and that Mercoid was entitled to affirmative injunctive relief against the patentee, stating (p. 684), "For the reasons stated in *Mercoid* v. *Mid-Continent Investment Co., supra,* the effort here made to control competition in this unpatented device plainly violates the anti-trust laws, even apart from the price-fixing provisions of the license agreements. It follows that petitioner is entitled to be relieved against the ~~consequences~~ of those acts." The decree entered in these two cases in the District Court pursuant to the mandate of the Supreme Court effectively protect the Mercoid Corporation from further misuse of the patents by Minneapolis-Honeywell and Mid-Continent Investment

Co. and render the patents unenforceable, without time limitation, as against Mercoid.[34]

We submit that the application of the doctrine of unenforceability of patents misused in violation of the antitrust laws in suits between private litigants demonstrates that similar relief is appropriate in suits instituted by the Government under Section 4 of the Sherman Act to restrain and prevent continued violations of the Sherman Act. The principal significance of those two cases lies, we believe, in their demonstration that the same basic rationale which renders abused patents unenforceable is operative alike under the patent statutes and the antitrust laws.

[34] In *Mid-Continent* v. *Mercoid*, Civil Action No. 2070, the District Court pursuant to mandate entered a final judgment on April 10, 1944, enjoining Mid-Continent Investment and Minneapolis-Honeywell Regulator Company from instituting or threatening to institute suits for contributory infringement of the Cross patent against Mercoid's customers, "or from in any manner interfering with defendant's business by use of the Cross patent;". Mid-Continent and Minneapolis-Honeywell were enjoined from engaging in or carrying out the conspiracy and combination in restraint of trade found by the Supreme Court or from engaging in any similar conspiracy involving the Cross patent. The patentees were further enjoined from enforcing or carrying out any of the provisions of the exclusive license or the sublicenses declared illegal in the Court's opinion and were enjoined from enforcing or carrying out any similar licenses involving the Cross patent. The complaint of Mid-Continent Investment Company and Minneapolis-Honeywell Regulator Company was dismissed. The Mercoid Corporation was also allowed treble damages and a master was appointed to ascertain the amount of damages suffered by Mercoid. [Footnote continued on next page.]

The public interest in patents has led this Court not to apply the doctrines which ordinarily govern private litigation. See pages 83–84, *supra*. No such obstacles impede the protection of the public interest in suits by the United States, on behalf of

In *Mercoid* v. *Minneapolis-Honeywell*, Civil Action No. 1839, the District Court pursuant to the mandate of this Court entered a final judgment on March 16, 1944, adjudging that Minneapolis-Honeywell had misused the Freeman patent in violation of Sections 1, 2 and 14 of the antitrust laws; decreed that the complaint of Minneapolis-Honeywell be dismissed; and issued ~~an injunction~~ perpetually restraining Minneapolis-Honeywell from granting any license to use the combination claimed by the Freeman patent where such use is conditioned on purchasing from Minneapolis-Honeywell or from sources designated by it any parts or devices to be used in combination but not patented by the Freeman patent. The Court also enjoined Minneapolis-Honeywell from selling any part or device with an understanding that the purchaser will be granted the right to use the Freeman combination patent on condition that such part or device shall be purchased from Minneapolis-Honeywell or from a source designated by it. Minneapolis-Honeywell was also enjoined from discriminating in the granting of licenses under the Freeman patent between users of such combination who purchase parts from Minneapolis-Honeywell or a source designated by it and such users who purchase such parts or devices from any other source. In addition Minneapolis-Honeywell was enjoined from so using the Freeman patent as to tend to create a monopoly in a part or device not patented by such patent or in any way misusing such patent in violation of the antitrust laws. Also enjoined were suits, or threats of suits, against customers of Mercoid for alleged infringement of the Freeman patent on account of the sale or use of devices obtained from Mercoid prior to the date of the judgment. Mercoid was allowed treble damages against Minneapolis-Honeywell and a special master appointed to ascertain the amount of damages.

the public, under the Sherman Act. The relief granted by the court in private patent litigation to protect the public interest as a matter of course dictates that the relief granted in public proceedings under the Sherman Act must be no less.

The instant case, brought under Section 4 of the Sherman Act necessarily involves more than mere injury to private parties and consequently the relief granted must give effective protection to the general public. We submit that in such suits this protection can only be had by a decree which enjoins the defendants from the future exercise of any of the rights granted by the patent statutes with respect to the patents misused in the unlawful conspiracy or monopoly. This implies no departure from or extension of the doctrine of future unenforceability by a misuser of the patent privilege established in the private litigation and infringement cases cited above. It is a recognition that the doctrine is based on an underlying public policy from which definite disabilities on patents have developed and are applied.[35]

[35] See Mr. Justice Rutledge's statement of this policy in his dissent in *Hartford-Empire* v. *United States*, 323 U. S. 386, 452-3:

"The general policy has been to restrict the right of the patent-holder rigidly within the terms of his grant and, when he overreaches its boundary, to deny him the usual protections of the holder of property. That this ordinarily has been done in infringement suits or suits for cancellation does not

The majority opinion in the *Hartford-Empire* case, 323 U. S. 386, apparently did not consider the applicability of the foregoing principles to patent rights standing alone. That opinion and the clarifying opinion, 324 U. S. 570, were primarily concerned with the effect of the judgment on past as well as future royalties which included past payments for rental of machinery and for servicing such machinery. Hence, a forfeiture of payments for products and services not fully covered by the patents was thought to be involved which suggested a confiscation of property rights not granted by the patent statutes.

It should be borne in mind that the application of the principles reviewed in the foregoing decisions is limited in this case to a prohibition against enforcement by the defendants of the misused patents quite apart from any relief relating to charges for machinery or services which were involved in the *Hartford-Empire* case.

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qualify the fact or the policy. * * * When the patentholder so far overreaches his privilege as to intrude upon the rights of others and the public protected by the anti-trust legislation, and does this in such a way that he cannot further exercise the privilege without also trespassing upon the rights thus protected, either his right or the other person's, and the public right must give way. It is wholly incongruous in such circumstances to say that the privilege of the trespasser shall be preserved and the rights of all others which he has transgressed shall continue to give way to the consequences of his wrongdoing."

D. THE DEFENDANTS HAVE DELIBERATELY EXTENDED THE PATENT PRIVILEGE BEYOND THE AUTHORIZED GRANT

The defendants' abuse of the patent privilege was not limited to single acts or to a series of acts but comprehended the entire industry, its present and future production, technology, markets and participants. The conspiracy was initiated at the time when three alternative processes for the production of titanium pigments were being developed. It resulted in the elimination of all competition in the development of these processes for commercial use. Eligibility to participate in the industry was conditioned upon the terms which conspirators had established for patent licenses and "a business, originally founded upon patents which have long since expired, is today less accessible to free enterprise than when it was first launched" (R. 221). The original patents have been extended to control over all the products and to all uses, compounds, and mixtures of titanium.

As a condition to the waiver of the right to exclude from the practice of the inventions covered by existing patents the parties to the conspiracy have, by private arrangement, extended the existing patent monopolies to restrain and monopolize subject matter and activities unprotected by the several patent grants. They have in fact accomplished all the advantages to

themselves and disadvantages to others which the rule limiting the grant to the invention seeks to prevent. The parties have tied as a condition to the exchange of exclusive licenses under existing patents a requirement that all future patents relating to the broad field of the titanium industry be exclusively licensed to the conspirators.

The parties have extended their existing patent monopolies by giving to them extraterritorial effect. Accordingly, the markets of the world have been divided into exclusive domains, each of which has been allocated to one or several of the conspirators. Existing patents monopolies have been extended to restrict or prohibit the exportation and importation not only of patented products but unpatented and unpatentable products. Exportation of titanium products has been prohibited even to countries where no system of patents exists. Marketing restrictions have been predicated on patent grants which even the parties themselves have recognized as of doubtful validity. To make doubly sure that the territorial allocations were respected, the parties to this conspiracy have been designated, each for his own respective territory, the exclusive agent for the marketing in such territory of titanium products produced by the other parties, such sales to be at prices and on terms determined by such exclusive agent. Disposition of titanium products after sale by the cartel parties has been

regulated to the end that customers of the cartel might not disturb the market allocations.

Licensing has been conditioned upon reciprocal undertakings to furnish all present and future "know-how" to the cartel parties.

The restrictions invoked by the parties as a condition to the waiving of the right to exclude extended beyond the life of any then existing patent.

By mutual agreement new parties to the cartel could gain access to the pooled inventions only upon condition that they would accede to all the above restrictions. Thus the new party was licensed under the pooled patents of the cartel only upon condition that such licensee would contribute to the pool not only his existing patents but also his future inventions, that he would obey the allocation of world markets and confine his activities to the market reserved to him, that he would impart to the cartel all his present and future technological information relating to the titanium industry.

Small American companies interloping in the American titanium market gained freedom from patent intimidation only upon accepting tonnage restrictions. Payment of substantial royalties has been based upon all titanium produced whether by utilization of the licensed inventions or by use of processes not subject to the licensed patents.

The abuse of patents occurred not only in their use after issuance by the Patent Office. Competition in the acquisition of patents was also proscribed in that defendants du Pont and National Lead adhered to the policy of privately determining which had priority in respect of patent claims which were the subject of interference proceedings in the Patent Office. (Motion of Defendant National Lead for Determination of Royalties, dated October 9, 1946, p. 9). The patent statutes contemplate issuance of patents only to the first inventors. Interference proceedings in the Patent Office are a means of assuring this result as well as avoiding the issuance of otherwise improper patents. This requirement has been disregarded and these safeguards nullified by defendants' program to eliminate all interference proceedings among themselves. As to existing patents and as to patents not then in existence the parties agreed never to contest their validity. By such activities the parties to the conspiracy eliminated the chief source of private resistance to the grant of improper patent monopolies (R. 221). The inevitable consequence has been a proliferation of patents uncontested in the Patent Office and untested by the courts. By multiplying monopolies, patents long since expired have retained their attribute of exclusivity by virtue of the pooling arrangements. In practical effect there has been no dedication to the domain of public tech-

nology of the subject matter covered by the expired patents.

The elimination of competition in the development of technology, the proliferation of uncontested patents, the conditioning of eligibility to enter industry or to utilize its products on the licensing terms fixed by the cartel, and the projection of the original patents to control all future developments in the industry represent all the evils which the principle limiting the patent privilege to a right to exclude from the invention, and only the invention, seeks to prevent. The defendant's activities have resulted in consummation of what the Court feared when in *United Carbon Co.* v. *Binney Co.*, 317 U. S. 228, 236, it said: "A zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention only a little less than unequivocal foreclosure of the field." Here the defendants, through their abuse of the patent privilege, have not only created a zone of uncertainty as to the scope and status of technology in the titanium field, but have succeeded in foreclosing the field and securing the inventions of others for their own use. The constitutional purpose of the patent system has thus been completely nullified.

It is now impossible to restore the research, which could have been done, to recreate the fin-

centive to invent, or to revitalize the prod of fear of competitive technological development which would have existed if the operations of the patent system had not been distorted by the defendants. It is impossible here, just as it is impossible where distortion of the patent system occurs by indefinite or unjustified claims, to reach back through time and withdraw from the course of events the evil effects on the patent system of the defendant's abuse of patents to achieve a complete monopoly of the industry. To maintain the future integrity of the patent system and to prevent continuance of the monopoly, complete unenforceability of the abused patent is as essential here as in any other of the situations where unenforceability results from extension of the privilege beyond the authorized grant.

Certainly, if a private litigant demonstrated these abuses in defense to an infringement action brought by these defendants, the courts would have refused enforcement of the misused patents and granted affirmative injunctive relief against future enforcement of the abused patents in accordance with the doctrine of the *Mercoid* cases. *A fortiori*, the Government should be accorded at least commensurate relief in this proceeding if the effectiveness of the antitrust laws is to be maintained and the integrity of patent system preserved.

E. THE HARTFORD-EMPIRE CASE IS INCONSISTENT WITH THE ABOVE PRINCIPLES AND SHOULD BE OVERRULED.

In *Hartford-Empire Co.* v. *United States*, 323 U. S. 386, the Court, speaking through less than a majority of the full membership, set aside the provision of the district court's decree requiring that the patents misused by the defendants be licensed royalty-free in the future. The reasoning of the opinion was (p. 414):

> Since the provisions of paragraphs 21 to 24 inclusive, in effect confiscate considerable portions of the appellants' property, we think they go beyond what is required to dissolve the combination and prevent future combinations of like character.
> * * *

The quoted passage seems to say that a court of equity may not order adequate anti-trust relief if the result would be that property values are destroyed. Such a theory, we submit, is in conflict with well-established principles of equity jurisdiction, applied in anti-trust cases and elsewhere. Furthermore, the premise upon which application of the theory rests is defective, inasmuch as misused patents cannot be enforced and hence have no value to be confiscated.

It is to be noted that in this case, as distinct from the *Hartford* case, in which Hartford was dependent for its revenues mainly on the royalties from its patents, the world-wide pool of patents

has been largely created through an exchange of royalty-free licenses (Findings 44, 48, 60 and 73; R. 251–254, 255–256, 270, 280–289). The cross-licensing arrangement between DuPont and National Lead initially provided for mutual royalties but no royalties were paid after 1936 (Finding 73). Thus income from royalty-bearing licenses under the defendants' patents has not been the objective that the defendants customarily have sought. Yet the decree in this case seeks to assure the defendants a reward, which they have never had before. To deprive the defendants of this new opportunity to use the antitrust decree against them as a basis for expanding their revenues from the misused patents can hardly be confiscatory.[36]

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[36] In its petition in the district court (see p. 58, supra), National Lead has stated: "Moreover, it is solely because of the Government's successful prosecution of this case that DuPont is enabled to demand any royalty from National. Had no case been started, or had the Government been unsuccessful, DuPont would not be in a position to collect any royalty from National. Stated in its simplest terms, therefore, DuPont's position comes down to this: As a result of a trial in which the Government has satisfied the Court that National and DuPont were together guilty of conspiring to violate Section 1 of the Sherman Act, DuPont proposes to extract millions of dollars from co-defendant National, a tribute which duPont would not be allowed to collect but for the Government's success in establishing the guilt of both companies. This absurd result cannot be the purpose of the decree. If such a result is achieved, it can truly be said that DuPont, and not the Government, won the case."

a. *To prevent the collection of royalties on unenforceable patents is not confiscation*

We have demonstrated in II that the patent and antitrust laws combine to render unenforceable patents which have been misused. The *Mercoid* cases, in which the patentee was both denied the enforcement he sought as plaintiff and enjoined under the Sherman Act, best illustrates the inseparability of the two approaches.

Since a patent, unlike physical property, is only a right to exclude, it has no value if the patentee cannot enforce that right. An antitrust decree which prevents enforcement of misused patents which the patentee could not enforce in private litigation, whether by a direct injunction against infringement suits or by ordering the patentee not to collect royalties, obviously does not confiscate anything of value.

The *Hartford* opinion (323 U. S. at 415) attempted to meet this argument by stating that *Morton Salt Co.* v. *G. S. Suppiger,* 314 U. S. 488, and *B. B. Chemical Co.* v. *Ellis,* 314 U. S. 495, cited by the Government:

> * * * merely apply the doctrine that, so long as the patent owner is using his patent in violation of antitrust laws, he cannot restrain infringement of it by others. * * *

But even if it can be said that the *Morton Salt* and *B. B. Chemical* cases rest entirely on the private law doctrine of "unclean hands" rather than on the public interest in the patent system,

the same cannot be said of the subsequent *Mercoid* cases which were decided after the *Hartford* case was first briefed and argued and were not mentioned in Mr. Justice Roberts' opinion. For in the second *Mercoid* case, 320 U. S. 680, the Court unanimously (with four concurring Justices noting the *Morton Salt Co.* case as sole authority, 320 U. S. at 684), allowed the petitioner affirmative injunctive relief against the patentee, a result which could not have been reached if the unenforceability of the patent was based only on the defensive principle of unclean hands. Even if the latter were the sole basis for unenforceability, however, it would follow that if patents are unenforceable they have no value. An antitrust judgment which recognizes this to be so accordingly cannot be deemed confiscatory, or a forfeiture. Its effect is primarily to prevent the patentee from using patents which could not be legitimately enforced to harrass potential users with the threat of expensive litigation which would often in itself be sufficient to compel them to pay tribute which could not be lawfully exacted.[37]

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[37] *United States* v. *Vehicular Parking, Ltd.*, 54 F. Supp. 828 (D. Del.); *Lynch* v. *Magnavox Co.*, 94 F. 2d 883 (C. C. A. 9); *Patterson* v. *United States*, 222 Fed. 599 (C. C. A. 6), certiorari denied, 238 U. S. 635; *A. B. Farquhar Co.* v. *National Harrow Co.*, 102 Fed. 714 (C. C. A. 3); Vaughan, *Economics of our Patent System*, pp. 147–152; Hamilton, Temporary National Economic Committee, Monograph 31, pp. 47–48, 89; Temporary National Economic Committee, Hearings, 537, 538, 585–6, 589, 590, 600, 613–14, 631, 790.

The *Hartford* opinion relies upon the failure of Congress to enact bills which would have enabled the courts "to cancel a patent which has been used as an instrument to violate antitrust laws" (323 U. S. at 416), or compelled "a patentee found guilty of violation of the antitrust laws * * * as a penalty, to license all his future inventions at reasonable royalties" (*id.* at 417).[38] But it does not follow that the failure of Congress to adopt such legislation shows that Congress meant to prevent equity courts from exercising their established powers to give adequate relief particularly where such relief follows principles already developed in patent cases. The most that can be said is that Congress has not found occasion to single out this type of legislation from the many other bills introduced and make it a special order of business for its determination. In these circumstances the recent

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[38] Although the Court relied upon these proposed bills in setting aside the royalty-free provisions of the District Court's decree, the Court apparently disregarded these bills by directing reasonable royalty licensing of defendants' existing and future patents. This result was all that some of the bills referred to in the Court's opinion sought to accomplish. Furthermore the fact that the majority opinion in the *Hartford-Empire* case ordered compulsory licensing at reasonable royalties for present and future patents and enjoined suits for past infringements, also indicates that the Court did not consider that relief in antitrust cases was limited by any overriding or clear-cut necessity for preserving improperly used patent grants.

warning by Justice Rutledge in *Cleveland* v. *United States*, decided Nov 18, 1946, Nos. 12–19, this Term, is pertinent. He said:

> Notwithstanding recent tendency, the idea cannot always be accepted that Congress, by remaining silent and taking no affirmative action in repudiation, gives approval to judicial misconstruction of its enactments. See *Girouard* v. *United States*, 328 U. S. —. It is perhaps too late now to deny that, legislatively speaking as in ordinary life, silence in some instances may give consent.[4] But it would be going even farther beyond reason and common experience to maintain, as there are signs we may be by way of doing, that in legislation any more than in other affairs silence or nonaction always is acquiescence equivalent to action.
>
> There are vast differences between legislating by doing nothing and legislating by positive enactment, both in the processes by which the will of Congress is derived and stated[5] and in the clarity

[4] As an original matter, in view of the specific and constitutional procedures required for the enactment of legislation, it would seem hardly justifiable to treat as having legislative effect any action or nonaction not taken in accordance with the prescribed procedures.

[5] See note 4. Legislative intent derived from nonaction or "silence" lacks all the supporting evidences of legislation enacted pursuant to prescribed pro-

and certainty of the expression of its will.[6] * * *

* * * Just as dubious legislative history is at times much overridden, so also is silence or inaction often mistaken for legislation.

Furthermore, the patent cases discussed, *supra*, pp. 78–79, and particularly the *Mercoid* cases are inconsistent with the notion that the failure of Congress to pass such bills precludes the courts from holding illegally used patents unenforceable, for that is precisely what the courts have done in the cases cited.

If, when necessary to afford effective relief in private antitrust suits, such as in the *Mercoid* cases, the courts may so decree, it is not likely that Congress intended the courts to have less power in antitrust actions instituted by the Government, see pp. 95–96, *supra*. Clearly, Section 4 of the Sherman Act (15 U. S. C. Sec. 4), which empowers the courts to prevent violations at the suit of the United States, is at least as broad as Section 16 of the Clayton Act (15 U. S. C. Sec. 26), which authorizes private persons to obtain

cedures, including reduction of bills to writing, committee reports, debates, and reduction to final written form, as well as voting records and executive approval. Necessarily also the intent must be derived by a form of negative inference, a process lending itself to much guesswork.

[6] See note 5.

injunctive relief in accordance with general principles of equity.[39]

b. *Equity has power to grant effective relief even though the result may be to impair property values*

Even if it be assumed, *arguendo*, that application of the unenforceability doctrine would deprive the patentee of presently existing values, it does not follow that such an order would be improper. In undoing the consequences of unlawful conduct, equity frequently may cause pecuniary injury to a defendant even though it has neither the power nor the desire to punish or to forfeit property. In such cases, equity courts

[39] The pertinent provisions of Sec. 4 of the Sherman Act read as follows: "The several district courts of the United States are hereby invested with jurisdiction to prevent and restrain violations of this act; and it shall be the duty of the several district attorneys of the United States, in their respective districts, under the direction of the Attorney-General, to institute proceedings in equity to prevent and restrain such violations."

The pertinent provision of Section 16 of the Clayton Act reads as follows: "Any person, firm, corporation, or association shall be entitled to sue for and have injunctive relief, in any court of the United States having jurisdiction over the parties, against threatened loss or damage by a violation of the antitrust laws, including sections two, three, seven and eight of this Act, when and under the same conditions and principles as injunctive relief against threatened conduct that will cause loss or damage is granted by courts of equity, under the rules governing such proceedings * * *."

do not first determine whether property rights will be affected or destroyed and if so hold themselves powerless to provide a remedy having such an effect, no matter how necessary to the undoing of the wrong, although they will, of course, endeavor to sacrifice property values as little as is compatible with the granting of adequate relief. They first decide what relief is essential, and any harmful but necessary effect on the property rights of the wrong-doer is *absque injuria*.

The *Hartford* opinion adopts the former approach. Instead of stating merely that a court of equity may not enter an order for the purpose of penalizing or confiscating, the opinion indicates (p. 414) that since the royalty-free provisions of the order confiscate property they necessarily "go beyond what is required to dissolve the combination and prevent future combinations of like character". This is a non sequitur. It puts the cart before the horse. The effect on property rights cannot determine whether such an order is in practice necessary to undo the effect of the conspiracy. The reasoning of the Court can be warranted only if there is a rule barring courts of equity from destroying property rights even when necessary to the granting of effective relief. The contrary, however, is clearly the case, as we will show.

It is well known that equity has power to abate a nuisance even though the effect may be to destroy property values, e. g., *Georgia* v. *Tennessee Copper Co.*, 206 U. S. 230, 237 U. S. 474; *American Smelting Co.* v. *Godfrey*, 158 Fed. 225 (C. C. A. 8); *United States* v. *Luce*, 141 Fed. 385 (C. C. D. Del.). A more direct deprivation of property, when necessary to do equity by restoring the *status quo* before the violation of law, occurs when money must be paid out, as for purposes of restitution. The forced payment of money is certainly the taking of the defendant's property. In *Porter* v. *Warner Holding Co.*, No. 793, 1945 Term, decided June 3, 1946, the Court upheld an order of monetary restitution in an injunction suit brought under the Emergency Price Control Act. In its opinion the Court stated with respect to the power of a court of equity:

> * * * Unless otherwise provided by statute, all the inherent equitable powers of the District Court are available for the proper and complete exercise of that jurisdiction. And since the public interest is involved in a proceeding of this nature, those equitable powers assume an even broader and more flexible character than when only a private controversy is at stake. *Virginian Ry. Co.* v. *System Federation*, 300 U. S. 515, 552. Power is thereby resident in the District Court, in exercising this

jurisdiction, "to do equity and to mould each decree to the necessities of the particular case." * * *

More closely akin to a patent is such intangible property as a contract right. That such a right may be abrogated when it stands in the way of effective antitrust relief needs no citation of authority.[40]

And if we turn to cases under the antitrust laws, it is clear that defendants have no right to escape compliance with a decree of divestiture, when that is necessary to restore competition, on the ground that available purchasers will not pay the full value of the property to be divested. Thus in *United States* v. *Union Pacific R. R. Co.*, 226 U. S. 61, 98, the Court ordered the stock in the Southern Pacific owned by the Union Pacific to be disposed of by "receivership and sale" if no satisfactory plan were presented in three months, without making its order conditional upon the bidders at the sale offering a price which would secure the defendants against property loss. The basic principle that loss of property value is to be avoided only to the extent that such a result

[40] The right to a trade-mark is also analogous to a patent right, and yet courts administering the Federal Trade Commission Act enjoin the use of deceptive trade names irrespective of whether the respondent has registered the name as a trade-mark and of the value which such a mark might have. See *Charles of the Ritz Distributors Corp.* v. *Federal Trade Commission*, 143 F. 2d 676, 679 (C. C. A. 2) and cases cited.

will not impair full effectuation of the object of the statute was stated when the *Union Pacific* case returned to this Court for instructions as to whether a proportional distribution of the Southern Pacific shares to Union Pacific stockholders were sufficient. In holding that it was not, the Court stated (226 U. S. 470, 477):

> So far as is consistent with this purpose a court of equity dealing with such combinations should conserve the property interests involved, but never in such wise as to sacrifice the object and purpose of the statute.

The same principle was applied in *Continental Insurance Co.* v. *United States*, 259 U. S. 156, a proceeding brought by Reading Co. bondholders who had not themselves violated the Antitrust Act. In sanctioning redistribution of the property secured to the bondholders by mortgage, this Court clearly indicated its desire to disturb their property rights no "more than seems necessary to effect fully the purpose of the law" (259 U. S. at 173), saying (at 171, 173):

> The power of the court under the Sherman Anti-Trust Law to disregard the letter and legal effect of the bonds and general mortgage under the circumstances of this case, in order to achieve the purpose of the law, we can not question. * * *
>
> We have no desire to vary the security of the bondholders more than seems neces-

sary to effect fully the purpose of the law, and wish to recognize their equities as against the two companies and the stockholders, as will later appear.

In a similar case decided the same day, the Court stated (*United States* v. *Southern Pacific Co.*, 259 U. S. 214, 241):

> We direct that a decree be entered severing the control by the Southern Pacific of the Central Pacific by stock ownership or by lease. But, in accomplishing this purpose, *so far as compatible therewith*, the mortgage lien asserted in the brief filed for the Central Union Trust Company shall be protected. [Italics supplied.]

These cases clearly demonstrate that in fashioning antitrust relief the courts should attempt to impair property value as little as is "compatible" with the accomplishment of the purpose of the antitrust law—not that they should refuse to give effective relief because property rights may be injured.

That this is the proper approach was recently reaffirmed in *United States* v. *Crescent Amusement Co.*, 323 U. S. 173, decided shortly before the Hartford-Empire case. The defendants there contended that the divestiture provisions of the decree (323 U. S. at 189):

> * * * are inequitable and harsh income tax wise; that they exceed any reasonable

requirement for the prevention of future violations, and that they are therefore punitive.

In reply, the Court stated (*ibid.*):

> The Court has quite consistently recognized in this type of Sherman Act case that the government should not be confined to an injunction against further violations. Dissolution of the combination will be ordered where the creation of the combination is itself the violation. * * * Those who violate the Act may not reap the benefits of their violations and avoid an undoing of their unlawful project on the plea of hardship or inconvenience. That principle is adequate here to justify divestiture of all interest in some of the affiliates since their acquisition was part of the fruits of the conspiracy. But the relief need not, and under these facts should not, be so restricted. The fact that the companies were affiliated induced joint action and agreement. Common control was one of the instruments in bringing about unity of purpose and unity of action and in making the conspiracy effective. If that affiliation continues, there will be tempting opportunity for these exhibitors to continue to act in combination against the independents. The proclivity in the past to use that affiliation for an unlawful end warrants effective assurance that no such opportunity will be available in the future. * * *

c. Where the lawful portion of the value of defendants' patents cannot be segregated from the value resulting from the unlawful combination, defendants are entitled to no return on the patents.

The provision that the defendants may not enforce their patents has another justification not considered in the *Hartford* case. Only the unlawful combination prevented competition between the Barton-Rossi, Jebsen, and Blumenfeld patents. The joinder of all the patents to create and maintain a patent position for exclusive use by the defendants is what has given the defendants their present advantage. If there had been competition between the three original patent developments, there would have been and would still be an incentive to keep the royalties low otherwise lacking. Under the present decree the District Court is to attempt to fix reasonable royalties. But a substantial proportion of the value of the defendants' patents at present exists only because of the prior lack of competition between the different lines of technological development.

If it were possible to segregate whatever value the patents now possess into the portion derived solely from the lawful patent right and not from the unlawful use the district court might proceed to establish royalty for the former alone.[11]

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[11] As to the difficulty of this see pp. 63–78, *supra*.

But defendants' unlawful conduct during over two decades has so established the structure of the industry that any such segregation is now utterly impossible. We do not believe that it can now be said with any certainty that any particular proportion of the patent values does not stem from the unlawful manner in which the patents have been used.

Inasmuch as this inability to determine the portion of the values attributable to the lawful patent right has resulted from the defendant's own misconduct, they must bear the burden of it. As this Court recently stated in dealing with an analogous problem in *Bigelow* v. *RKO Radio Pictures*, 327 U. S. 251, 265:

> The most elementary conceptions of justice and public policy require that the wrongdoer shall bear the risk of the uncertainty which his own wrong has created. See *Package Closure Corp.* v. *Sealright Co.*, 141 F. 2d 972, 979. That principle is an ancient one, *Armory* v. *Delamirie*, 1 Strange 505, and is not restricted to proof of damage in antitrust suits, although their character is such as frequently to call for it application. * * * And in cases where a wrongdoer has incorporated the subject of a plaintiff's patent or trade-mark in a single product to which the defendant has contributed other elements of value or utility, and has derived profits from the sale of the product, this

> Court has sustained recovery of the full amount of defendant's profits where his own wrongful action has made it impossible for the plaintiff to show in what proportions he and the defendant have contributed to the profits. *Westinghouse Co.* v. *Wagner Mfg. Co.*, 225 U. S. 604; *Hamilton Shoe Co.* v. *Wolf Brothers*, 240 U. S. 251; see also *Sheldon* v. *Metro-Goldwyn Corp.*, 309 U. S. 390, 406.

The illustration last quoted is the converse of the situation here. Where the wrongdoer has by his own conduct prevented severance of the wrongful and lawful portions of the value of a patent, he should be entitled to nothing. This result is reached not for purposes of punishment, but to restrain defendant from further profiting from his wrong at the expense of the victims of the crime.

A similar principle proclaimed in a number of antitrust cases permits the cancellation of valid as well as of invalid segments of an unlawfully established system "in order that the ground may be cleansed effectually from the vice of the former illegality. Equity has power to eradicate the evils of a condemned scheme by prohibition of the use of admittedly valid parts of an invalid whole". *United States* v. *Bausch & Lomb Co.*, 321 U. S. 707, 724. Similarly in dealing with a scheme containing an intermingling of lawful and unlawful provisions, the Court stated in

United States v. *Univis Lens Co.,* 316 U. S. 241, 254:

> But if we assume that such restrictions might otherwise be valid, cf. *Fashion Guild* v. *Trade Commission,* 312 U. S. 457, 467, these features are so interwoven with and identified with the price restrictions which are the core of the licensing system that the case is an appropriate one for the suppression of the entire licensing scheme even though some of its features, independently established, might have been used for lawful purposes. *Ethyl Gasoline Corp.* v. *United States, supra,* 461. * * *

d. *The duration of the injunction against enforcement*

In the Government's original assignment of errors it was urged that the District Court erred by not making defendants' patents royalty free until the consequences of the defendants' misconduct should have been dissipated (R. 330). The Government has moved to amend this assignment so as to enjoin the enforcement of defendants titanium patents for the remainder of their lives. As appears from the motion to amend, the latter relief was well within the limit of the relief requested from the court below.

For the reasons set forth herein we believe that defendants are not entitled to any royalties on the patents they have misused. If the Court

is unwilling to accept this contention or to permit the amendment of the assignment of errors, the Government requests in the alternative that the defendants be enjoined from enforcing their patents or collecting royalties thereon until they show that the effect of their wrongdoing has been fully dissipated and a truly competitive industry restored.

Our reasons for urging that the public interest requires that defendants' patents be rendered unenforceable for the remainder of their lives may be briefly summarized as follows:

(1) The unlawful use of the patents here involved, the combination which prevented competition in licensing and inventing, was in large part, to an undefinable extent, responsible for defendants securing royalties on the patents. The combination left the two defendants in a dominant position over the industry. To require others to pay the defendants royalties, would, as has been shown *supra* pp. 54–63, preserve the defendants' advantage and thereby prevent neutralization of their unlawful conduct and the establishment of effective competition. Thus the consequences of the unlawful conduct can never be dissipated while royalties continue to be paid.

(2) As a practical matter, newcomers would be discouraged from entering the industry if there was a possibility that at some future time

they might be forced to commence paying royalties. Potential competitors would doubtless recognize that when this occurred royalty payments would give the defendants an advantage over them at least in the amount of the royalties. Since many of the chemicals produced are standardized products, even a small difference in production costs would render it difficult for a newcomer to compete. The mere possibility that royalties might have to be paid at some unknown future time would therefore in itself prevent the investment of capital in new enterprises in the field. The seemingly reasonable restriction on the period of the royalty free licensing would thus completely block the establishment of an industry in which others might compete with the defendants.

(3) The same reasons which have led to the unenforceability of the patent privilege under the patent laws where the privilege has been used so as to create, or to threaten the creation of, a monopoly beyond the authorized grant are *a fortori* applicable where the extension of the privilege is the deliberate program of an illegal combination. Both the integrity of the patent system and the efficacy of the antitrust laws require termination of the patent privilege which has been abused by such a deliberate program.

II

PERMITTING RECIPROCAL LICENSING INCREASES DEFENDANTS' DOMINATION OF THE INDUSTRY

The judgment of the trial court provides (R. 313) that the licenses granted by the defendants "may, at the option of the licensor, be conditioned upon the reciprocal grant of a license by the applicant, at a reasonable royalty, under any and all patents covering titanium pigments or their manufacture, now issued or pending, or issued within five years from the date of this decree, if any, owned or controlled by such applicant." The inclusion of such a provision is not required (*Hartford-Empire Co.* v. *United States*, 323 U. S. 386) and its inclusion in this case at the request of the defendants (R. 116–126, 1242) impairs the capacity of the judgment to restore competition in the industry.

The judgment is intended to "restore titanium to the system of free competition" (R. 222) by neutralizing the means by which the emergence and growth of competition has been stifled. We assume it to be conceded that this cannot be accomplished unless non-defendants have access to patents of the defendant. However, access to these patents neutralizes but one means of defendants' control. Non-defendants will still be faced with the practical competitive disadvantages inherent in competing with the long-entrenched duopoly. The present condition on access to

patents of defendants increases this disparity in the competitive positions of defendants and non-defendants. It requires each non-defendant who would use the patents of the defendants to surrender to its entrenched competitors the competitive advantage of any patent it may have or acquire. The extent of this surrender is complete. A non-defendant who wishes to use a single patent of the defendants must surrender to them licenses under every patent it now owns or acquires within five years. Moreover, the cumulative effect of these surrenders still further increases the disparity in positions since each defendant acquires licenses under all the patents of each non-defendant while each non-defendant acquires licenses only under the patents of the defendants.[42] The result is a continually enlarging pool of patents available to defendants but unavailable to every outsider. A final consequence is to remove from non-defendants one of the incentives to invent.

The considerations which induced the trial court to include this provision are suggested by its remarks at the hearing on the form of the judgment. It is inferable that the Court believed its effect would be to create a pool of patents to

[42] The defendants would not be required to grant sublicenses to other non-defendants. The judgment does not require that the defendants be granted power to sublicense and, even if such power were granted, the judgment applies only to exclusive licenses acquired by the defendants (R. 310).

which every producer in the industry would have access (R. 1252). We have already shown that this would not be its effect since the patents of one non-defendant are not made available to other non-defendants. Moreover, even if such was its effect it would still be inappropriate for the reasons stated.

The district court intimated that it might also have been influenced by the fact that "conceivably" a non-defendant might become "the dominating factor in the industry under this extraordinary advantage of being able to take everything for itself and keeping everything that it has" (R. 1274). Such a result might be conceived, but we submit it is so highly improbable under the facts of this case as not to justify the inclusion of a provision which is actually in derogation of the statutory objective of the judgment. While we believe such a development impossible, we wish to point out that if such a possibility existed it would merely show how much the defendants' unlawful aggregation of patents has suppressed the growth of competition. It is the function of the judgment to restore the industry to competition irrespective of its consequences on defendants' positions. It is clearly improper to require a non-defendant to surrender lawfully acquired competitive advantages to protect the defendants' unlawfully acquired position from the effects of the competition the Act seeks to protect.

National Lead contended in requesting the inclusion of the provision that the defendants "are entitled to the same treatment from their competitors as they are required to accord to them." This contention fails to consider that these competitors were not parties to the action and have not been found guilty of violating the Sherman Act or abusing the privilege conferred upon them by a patent grant. We do not believe that a court has *power* to restrict the lawful competitive advantages of a non-defendant. Insofar as such competitive advantages may exist, they are factors which the Court may take into consideration in determining the nature and quantum of the relief against the defendants in the action. But they clearly may not be made the basis for any affirmative scheme of judicial future regulation of those advantages under the guise of an injunction against the defendants. There is, therefore, no basis for subjecting their patents to compulsory licensing to the defendants.

III

The Need To Give Outsiders Access to the Technology of the Industry

The technology of the titanium pigment industry may for present purposes be divided into two classes. The first class includes a body of information relating to its general problems. Some of these problems are among those on which

DP and NL are shown by the record to have exchanged information, *supra*, p. 33. The second class includes information directly related to the manufacture of specific products and the methods of practicing inventions embodied in expired or existing patents. The defendants and their coconspirators have by means of the unlawful combination to which they were parties acquired and maintained as a closely guarded secret a monopoly of this technology and this monopoly is one of the sources of defendants' control over the industry, *supra*, p. 51. The judgment of the district court does not grant outsiders access to this fund of accumulated knowledge. The judgment merely provides that for a period of three years a license granted pursuant to paragraph 7 may at the option of either party contain a provision for imparting at a reasonable charge and in writing the methods and processes used by the licensor in its commercial practice under the licensed patents in connection with the production of titanium pigments (R. 314). Its effect is to continue the exclusion of outsiders from the general technology of the industry and place outsiders under a competitive disadvantage as a result of lack of information on the solution of the general problems of the industry. Its further effect is to exclude outsiders from the technology relating to the production of products within the ambit of the restraints of the industry, as defined by the

definition of "licensed field" in the various agreements, which are neither patented nor produced by a patented process or apparatus (RE. 1452). It also excludes outsiders from the technology relating to the practice of the inventions embodied in expired patents including the basic patents upon which the industry is based. And finally its effect is to exclude outsiders from the technology relating to the practice of any patented invention which the defendants have not put into commercial use.

If defendants' control over the industry is to be neutralized and outsiders are to be given an opportunity to compete within any reasonable time in all the products included in the trade and commerce restrained, these outsiders must be given access to the entire technology of the industry. But in any event the information to which they should be granted access should not be narrower in scope than that provided for in the agreements between DP and NL. The requirement that the licensee pay a reasonable charge for the information will, as a practical matter, tend to limit to the irreducible minimum the information which the defendants will be required to impart to outsiders.

The present provision of the judgment insofar as it requires the imparting of information relating to the inventions embodied in the license patents is not unlike those frequently contained

in the normal patent license. The provision may be adequate in such cases because of the difference in the problem presented in the usual case of a patent license. The basic technology of the industry is known or available, hence all that is needed is the technology relating to the licensed patent. The situation here stands on a different footing. The basic technology of the industry is a closely guarded secret of the conspirators and a means by which the unlawful control of the industry has been achieved. The object of the provision is to neutralize this control and assist in opening the industry to outsiders. Any argument that the present provision is adequate misconceives its purpose to be merely to permit the outsiders to practice the inventions contained in the licensed patents.

We recognize that this Court in the *Hartford-Empire* case, 323 U. S. at 418, without stating any reason, deleted paragraph 24 (c) of the decree of the district court which required the petitioners to furnish at cost-plus a reasonable profit all drawings and patterns relating to the machinery or methods and in the manufacture of glassware embodied in the licensed inventions. Section 24 (c) seems to have been treated as an integral portion of Section 24 (a), which was concerned with royalty-free licensing. For the reasons heretofore indicated in this brief, we believe that even on that assumption such a provision would

have been proper. But in this case the need for giving the entire industry access to the defendants' technology justifies a provision to that effect in the decree irrespective of whether the patents are made unenforceable. The defendants' monopoly of the technology was an independent means of control of which they must be divested if true competition in the industry is to be restored. It should be noted that the defendants will receive a reasonable compensation for furnishing the technology, so that the inclusion in the judgment of the relief demanded by the Government in this respect is not at all inconsistent with the holding in the *Hartford* case with respect to royalty-free patents.

IV

The Need for Partial Divestiture of Plants

National Lead and duPont each own and operate two separate plants for the manufacture of titanium pigments. The plants of National Lead are located at St. Louis, Missouri, and Sayreville, New Jersey; those of duPont at Baltimore, Maryland, and Edge Moor, Delaware (R. 1153, 874, Govt. Ex. 3).[43] It is the Government's contention that effective relief requires each of the defendants to transfer one of its plants to a new corporation whose stock should be sold to

[43] By stipulation between the parties Exhibit 3 was not reproduced but is a part of the record for all purposes (R. 360).

and owned by others than the defendants or their co-conspirators.

The district court found that the defendants acquired domination and control of the industry as a result of the unlawful agreements. They produce 100 per cent of the composite and 90 per cent of the pure titanium pigments produced in the United States. They possess the competitive advantage of size, capacity, assured source of ilmenite, the cumulated experience and technology of the major producers here and abroad, extensive research facilities, trained personnel, established trade connections and good will, and probably much lower production costs than those who do or would compete with them. *Supra*, p. 56.

These competitive advantages give them the power to suppress the competition of others. An industry so constituted with its dominant members so armed is not attractive to the huge capital necessary to enter it. And those who are already in the industry or may later enter it are faced with such serious competitive handicaps ~~that~~ their substantial growth is problematical. The position of competitors in this regard is not unlike that which prompted the court to say in *United States* v. *Aluminum Company of America*, 148 F. 2d 416, 431 (C. C. A. 2):

> It [the defendant Aluminum Company] insists that it never excluded competitors; but we can think of no more effective

> exclusion than progressively to embrace each new opportunity as it opened, and to face every newcomer with new capacity already geared into a great organization, having the advantage of experience, trade connections and the elite of personnel.

The above language was quoted and "endorsed" in *American Tobacco Co. v. United States*, decided June 10, 1946, Nos. 18–20, last Term.

Reality requires the assumption that defendants will utilize to the fullest every advantage they possess. Unquestionably they will adopt policies designed to prevent outsiders from capturing any portion of the market the defendants have so long regarded as their own.

Since the emergence of any, or at least substantial, competition within any foreseeable period is unlikely, the existing industrial pattern will probably continue; and with it the existing marketing pattern in which purchasers are denied the benefits of true competition. Economic studies have demonstrated that when two great corporations completely dominate an industry there is no incentive for the two corporations to compete with each other, quite apart from the presence or absence of collusive agreements between them.[illegible] Duopoly, the control of an

[illegible] Wilcox, *Competition and Monopoly in American Industry*, Temporary National Economic Committee Monograph No. 21, 76th Cong., 3d Sess. (1940), pp. 9–10, 98–112; Chamberlin, *The Theory of Monopolistic Competition*, 1935, Ch. III.

industry by two giant corporations where each has the power to weigh acceptance of a share in a stable market against the rigors of price competition inevitably has the same basic characteristics and the same ultimate effects as monopolization of an industry by a single corporation. In this case the duopoly has demonstrated the characteristics and effects of monopoly. Price uniformity resulted from the duopoly even though the lower court found no evidence of express agreement on prices. Without divestiture the private interests of the duopolists continue to be set against the public interest because the hazard of competition is too great and the premium of "price stability" becomes a necessity in the eyes of the management. It ignores the realities inherent in the concentration of economic power possessed by these two defendants, to say that competition in the titanium industry can be restored merely by the application of injunctive relief against future conduct. The course of conduct of the two defendants over a period of years is too long engrained in the business attitudes of the management of the two corporations to be rectified by enjoining certain restrictive practices. The titanium industry is only an isolated instance of the dangerous trend toward concentration of economic power in the hands of a few industrial giants.[45]

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[45] *Economic Concentration in World War II*, Report of the Smaller War Plants Corp. to the Special Committee to Study Problems of American Small Business, 79th Cong., 2d Sess. 1946.

This trend cannot be curtailed unless duopolies adjudged to have violated the Sherman Act are divested of sufficient part of their assets to establish new competing units in the industry.

Thus there now exists in each of the defendants a power which in and of itself operates to continue substantially to deprive competitors and the public of the benefits of the Sherman Act. Since this continually operating and expanding force cannot be neutralized or otherwise controlled by enjoining future conduct we contend that establishment of new competing units out of the old noncompeting duopoly is the only appropriate remedy.

The court has sanctioned partial divestiture to neutralize power restrictive of competition. Thus partial divestiture has been approved when the court found a fused combination unlawful because of the power created by the fusion. The classic examples of this type of case are *Standard Oil Co.* v. *United States*, 221 U. S. 1, and *United States* v. *American Tobacco Co.*, 221 U. S. 106. We believe these cases establish a general principle that such relief is appropriate whenever a power exists which must be neutralized and cannot be neutralized by injunctive relief. It is true that divestiture in these cases was applied to the domination of the industry by a single corporation. But it certainly cannot be seriously urged that the Sherman Act is applicable only to domination by a single person or corporation. *Ameri-*

can Tobacco Co. v. United States, decided June 10, 1946, Nos. 18–20, 1945 Term. If it is true that two corporations can unlawfully monopolize, then certainly the power of the courts to create competing units by partial divestiture of the two would exist no less than in the case of a single monopolist. The real question here is not the power of the court to divest, but the necessity of divestiture to secure adequate relief in this particular case. That the courts have also recognized that adequate competition cannot be secured in a duopoly situation, much less with a duopoly characterized by an entire history of complete absence of competition, is evidenced from the fact that in every divestiture or dissolution suit in the past, the creation of more than two competing units was required.[46]

Defendants' position that partial divestiture is appropriate only when power has been acquired by acquisitions or fusions of competitors fails to consider that the purpose of such relief is to neutralize a power and not to undo acquisitions

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[46] In *United States v. Standard Oil Co.*, 173 Fed. 177 (C. C. E. D. Mo.) there were approximately 40 units in the various branches of the industry. The smallest number of units in any one field was 5, i. e., production. See Commissioner of Corporations, I Report on Petroleum Industry (1907), 85 *et seq.*; in *United States v. American Tobacco Co.*, 164 Fed. 700, 164 Fed. 1024 (C. C. S. D. N. Y.), there were 14 units of which 3 were full line; in *United States v. E. I. Du Pont de Nemours & Co.*, 188 Fed. 127 (C. C. Del.), there were 3 units; in *United States v. Corn Products Refining Co.*, 234 Fed. 964 (S. D. N. Y.) 4 plants.

and fusions.[47] The excerpt, quoted *supra*, p. 47, from the opinion in the *Standard Oil* case, makes this clear. Moreover, it has been held that a company which acquired monopoly power merely by expanding its facilities to meet the growing demands of an industry is not invulnerable to partial divestiture. *United States* v. *Aluminum Company, supra*. Certainly when such expansion is promoted by the use of unlawful devices the power so acquired may be neutralized by partial divestiture.

The position that partial divestiture is appropriate only in cases of illegal acquisitions or fused combinations means that a court could not grant effective relief. It would mean in this case, for example, that Virginia Chemical and Zirconium, whose growth was unlawfully stifled by the defendants, must now attempt to expand and acquire the position of which they were deprived without the benefits of a rapidly enlarging demand and by a competitive struggle in which their competitors, the defendants, are powerfully armed with the fruit of their wrong-doing.

Since the defendants possess this power, it would seem immaterial, when the issue is one of

[47] The development of titanium as a pigment threatened established interests of duPont and National Lead in white lead and lithopone. Both duPont and National Lead, respectively, made their entry into the titanium field by acquiring control over other manufacturers of pigments interested in the then developing titanium field. (R. 238, 246.) Historically, at least, the fusion of potentially competitive units occurred in the development of the present titanium duopoly.

relief as distinguished from the issue of whether there has been a violation of the act, whether the power was lawfully or unlawfully acquired. However, it is clear that in this case the defendants did unlawfully acquire their power. Since its inception, the domestic industry has been protected from the competition of foreign-made products by the agreements of foreign producers not to export to or compete within the United States; from the competition of goods produced in the United States under patents owned by foreigners by virtue of the agreements of the foreigners to make those patents available only to the defendants; and from the competition of Virginia Chemical and Zirconium by the limitations on their production. Moreover, a purpose of the DP and NL agreement was their mutual desire to strengthen their position *vis-a-vis* outsiders. This desire was accomplished by the agreement which also produced a proliferation of patents. The combined result was an effective patent barrier to new compettition. Clearly, since the agreements contained provisions calculated to accomplish that purpose, defendants cannot say, when the purpose has been accomplished, that the accomplishment was not the result of the unlawful agreements either as a matter of law or of fact. The situation thus is one in which the defendants unlawfully freed of competition from others, have together been able to preempt a growing market and to create facilities and organizations capable of handling the ever expanding demand.

As stated by the District Court in the *Hartford-Empire* case (46 F. Supp. 541, 618 (N. D. Ohio), prior to this Court's decision:

> Men cannot, by illegal means, erect an illegal structure—a structure of dominance and control over an industry vital to the welfare of the public—and then, by destroying the illegal means by which the structure has been erected, take the position that they have reformed, that they have adopted a new course of conduct, and that they should go on their way unmolested by the law—as long as the illegal structure and its adverse effects upon the public remain.

Even if it be assumed that other relief granted against them would make du Pont and National Lead fully competitive, as against each other, the competition envisioned by the Sherman Act would not have been restored to this industry. The spectacle of any two companies, which dwarf all existing competitive units in the scale of their operations and control of physical assets, engaging in a competitive struggle with each other so severe as to reduce substantially their own position with respect to the rest of the industry is not one which has been observed in recent years. But two such companies with a record of Sherman Act violation are certainly not going to suffer a change in their basic economic attitudes sufficient to make such conduct probable, or even possible, by the entry of a decree which does no more than enjoin particular restrictive practices. Thus, the only way in which substantial units with the power and desire to compete

actively in such an industry may be created is by the transfer of substantial assets of the dominant violators into clean hands.

The choice presented by the Government's appeal is between regulation and elimination of monopoly power. If, as the *Tobacco* case[48] suggests, the Sherman Act is primarily concerned with the possession of monopoly power by those who have demonstrated an intention to abuse it, destruction of such power by judicial decree should follow a finding of illegal acquisition or abuse as a matter of course. Where Congress has intended to recognize the continued existence of such power it has established an appropriate administrative agency to regulate it and has conspicuously refrained from committing to courts the kind of regulatory task implicit in the decree entered below.

The district court's ~~failure to assume~~ assumption of that task was apparently dictated by a doubt that this Court would sanction a decree which actually destroyed the power of the defendants to dominate the industry here involved. We think the *Tobacco* case has resolved any doubt that monopoly power itself rather than its mere exercise is the principal target of a Sherman Act suit. This Court's action in the *Crescent*[49] and *Schine*[50]

[48] *American Tobacco Co.* v. *United States*, Nos. 18, 19, 20, 1945 Term, decided June 10, 1946.

[49] *United States* v. *Crescent Amusement Co.*, 323 U. S. 173.

[50] *United States* v. *Schine Chain Theatres*, 63 F. Supp. 229.

cases also appears to answer any doubt that a Sherman Act decree should effectively divest the defendant of monopoly power, rather than rely upon any scheme for judicially regulating such power.

The *Crescent* case sanctioned a divestiture of stock in non-defendant corporations the acquisition of which was not itself unlawful, recognizing that possession of such stock in the hands of defendants who had abused the power so acquired was itself a continuing threat to independent competitors. In the *Schine* case the district court ordered a divestiture of theatres in towns where there was no evidence of elimination of existing competitors as a means of creating competition for the defendants. That court recognized that the possession of certain physical assets not independently used in connection with any specific law violation was also a continuing threat to independent competition. In both cases divestiture of assets was held to be a proper and necessary means of eliminating this threat, notwithstanding the presence in both decrees of injunctive provisions expressly prohibiting the particular forms of unlawful conduct upon which the convictions of Sherman Act violation rested.

While it is true that in these cases this Court merely affirmed the exercise of an admittedly

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(D. C. W. D. N. Y., 1945), appeal dismissed, No. 572, this Term, December 16, 1946, petition for rehearing filed, January 9, 1947.

wide discretion by district courts, we do not believe that their discretion embraces a choice between at least partial divestiture of monopoly power and future judicial regulation of such power in the hands of defendants guilty of its unlawful acquisition or use. Certainly the degree of divestiture required to remove the threat implicit in the continued possession of such power by such defendants may largely rest with the discretion of the trial court, but neither Congress nor this Court has so far told the district courts that they may establish or administer a regulatory scheme of control as a substitute for the divestiture relief customarily required to eliminate such power.

The inquiry as to the propriety of the divestiture relief sought here is actually an inquiry into the source of the power by which these defendants now control the monopoly percentages of the titanium pigment market which they were found jointly to possess. Whether any particular plant or other physical asset of either defendant is a direct or indirect product of the particular unlawful means by which the over-all monopoly position was achieved is obviously irrelevant to this problem. If as seems clear from the evidence their overwhelming control of plant capacity itself promises to permit continued dominance of the industry by them no relief is adequate which does

not transfer a substantial part of that capacity to a competitor with clean hands.

Where two or more industrial units have jointly gained such dominance by illegal means they should not be permitted to retain physical facilities which allow continued dominance by lawful methods. Otherwise this Court's assumption in the *Tobacco* case that the Act is aimed ultimately at removal of monopoly power from the hands of Sherman Act violators, even when jointly possessed by two or more, becomes meaningless when applied to equity suits. We respectfully submit that this Court should insist that this assumption be made effective in civil suits by directing relief which attacks monopoly power at its source. We submit further that this Court should also disavow the involved systems of attempted judicial regulation of such power resulting from mistaken efforts to avoid the admittedly drastic consequences of a direct attack. The district courts are by their nature and experience equipped to reorganize corporate assets and enforce unequivocal prohibitions of specific future conduct. They do not have the technique or personnel required to administer competition in any industry and the consequences of their assumption of such a burden may well be more drastic in their effect on the whole economy than the simpler and sterner measures embodied in traditional antitrust relief.

CONCLUSION

For the above reasons it is respectfully submitted that the judgment of the court below should be modified so as (1) to enjoin the enforceability of the defendants' patents herein involved for the duration of the terms of the grants, (2) to forbid the defendants from requiring cross licenses of patents in return for licenses of the defendants' patents, (3) to require the defendants to furnish to any applicant the technological information of defendants at a reasonable charge, (4) to require each defendant to divest itself of one of its titanium plants, and in such other and further respects as may be necessary or appropriate to carry out the foregoing modifications.

Respectfully submitted.

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